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UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
WASHINGTON, D. C.
H. H. BENNETT, CHIEF

SEED PROPAGATION OF TREES, SHRUBS, AND FORBS FOR CONSERVATION PLANTING

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Prepared for the Technicians of the
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SCS-TP-27
September - 1939

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SEED PROPAGATION OF TREES, SHRUBS, AND FORBS FOR CONSERVATION PLANTING

A compilation of information on number of seeds per pound, germination percentages, recommended handling, and yield of plants

Assembled by Charles F. Swingle, Horticulturist, from the literature and from unpublished information, especially that supplied by technicians of the Nursery Division, Soil Conservation Service

Prepared for the technicians of the Soil Conservation Service

SCS-TP-27
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KEY TO REFERENCES (Con't.)

(16) Soil Conservation Service Data, Region 7, 1935 Seed Crop.

(17) " " " " " 8, 1935 " "

(18) " " " " " 9, 1935 " "

(19) " " " " " 1, 1936 " "

(20) " " " " " 5, 1936 " "

(21) " " " " " 10, 1936 " "

(22) " " " " " 11, 1936 " "

(23) Darrow & Sherwood, Amer. Soc. Hort. Sci. Proc. 1931: 194-199.

(24) Pettis, C. R. 1909 U. S. Forest Service Bull. 76.

(25) Sudworth, S. E. 1900. U. S. Forest Service Bull. 29.

(26) Yerkes, G. E. 1932. Propagation of Trees and Shrubs. U. S. Dept. Agr. Farmers Bull. 1567, and additional information.

(27) Steinbauer and Steinbauer, Amer. Soc. Hort. Sci. Proc. 1931, 26: 441-443.

(28) Soil Conservation Service Data, Region 8, 1936 Seed Crop.

(29) Yerkes, G. E., Proc. Ninth Int. Hort. Congress, London, 83-91, 1930.

(30) Erosion Control Nursery Data. Bureau of Plant Industry, 1933 Seed Crop. Ames, Ia.

(31) Amadon, A. F., Albany, N. Y. unpublished data.

(32) Brown, Otto, Erosion Control Nurseries and Soil Conservation Service Unpublished Data.

(33) Soil Conservation Service Data, Region 4, 1936 Seed Crop.

(34) Swingle, Charles F., Natl. Nurseryman 33: 197-200, 1925.

(35) Soil Conservation Service Data, Region 6, 1936 Seed Crop.

(36) " " " " " 5, 1937 " "

KEY TO REFERENCES

(1) Toumey, J. W. and C. F. Korstian
Seeding and Planting in the Practice of Forestry, 2nd Ed. 1931.

(2) Propagation of Game Food and Cover Plants of the Lake States.
Lake State Forest Exp. Station. Mimeo. St. Paul, Minn. October 1935.

(3) Seed and Nursery Practice. U. S. Forest Service, Shelterbelt Project.
Mimeo. Lincoln, Nebr. March 23, 1936.

(4) Seed Collection of Woody Plants. U. S. Soil Conservation Service,
Region 7, Salina, Kans. Mimeo. May 1936.

(5) Technical Notes - Lake States Forest Exp. Station, St. Paul, Minn. 1935.

(6) Muenscher, V. C. Storage and Germination of Seeds of Aquatic Plants.
Cornell Agr. Exp. Sta. Bul. 652, July 1936.

(7) Tesov, N. E. and A. P. Tolski,
Tree Seeds of the Soviet Union 1935.

(8) Kern, E. E. Vazhneishie inozemnye drevesnye porody prigodnye dlia
razvedeniia V. U. S. S. R. 1934.

(9) Erosion Control Nursery Data, Bureau of Plant Industry,
1933 Seed Crop. Cheyenne, Wyo.

(10) Erosion Control Nursery Data, Bureau of Plant Industry,
1933 Seed Crop. Mandan, N. D.

(11) Erosion Control Nursery Data, Bureau of Plant Industry,
1934 Seed Crop. Mandan, N. D.

(12) Erosion Control Nursery Data, Bureau of Plant Industry,
1934 Seed Crop. Statesville, N. C.

(13) Erosion Control Nursery Data, Bureau of Plant Industry,
1934 Seed Crop. Cheyenne, Wyo.

(14) Erosion Control Nursery Data, Bureau of Plant Industry,
1934 Seed Crop. Tucson, Ariz.

(15) Soil Conservation Service Data, Region 1, 1935 Seed Crop.

INTRODUCTION

At the beginning of the large-scale conservation work undertaken by the Soil Conservation Service, the technicians of the Service were confronted with the necessity for producing large numbers of plants that had never before been grown, at least in the enormous numbers requested. Of course, the question arose immediately as to collection and handling of seed, including especially the amount of seed required to grow a given number of plants. An examination of all available information brought out the fact that, except for a few well known forest species, relatively little was on record of immediately practical help to our nurserymen.

During the past six years the technicians of the Soil Conservation Service have accumulated a large amount of information relative to number of seeds per pound, germination and cutting tests, and recommended handling. Workers in the United States Forest Service and other agencies have likewise made available considerable information of this nature. All records of this sort, from whatever source obtained, have been assembled in the Washington office of the Nursery Division and are presented herewith.

Although the compiler has made numerous changes in nomenclature, has transposed Centigrade temperatures to Fahrenheit, translated various types of seed weight into number of seed per pound, and has also averaged various numerical reports from the same source, it must be emphasized that the responsibility and credit for the work reported rests with the workers referred to, especially to the technicians of the Soil Conservation Service.

It will be immediately obvious to the reader that many omissions exist in our knowledge, even with plants playing predominant roles in the conservation program. This is particularly true for records on number of usable plants obtained per pound of seed sown. Accordingly, it is requested that the Washington office of the Nursery Division be advised of any pertinent information at hand, both as regards apparent errors or questionable figures, and especially any available data on yield of plants per pound of seed. It is hoped that with such information eventually this provisional mimeographed list can appear in a more permanent form.

KEY TO REFERENCES (Con't.)

(37) Soil Conservation Service Data, Region 7, 1936 Seed Crop.

(38) Flemion, F., Contr. Boyce Thomp. Inst. 6: 91-102, 1934.

(39) Barton, L. V., Contr. Boyce Thomp. Inst. 6: 68-89, 1934.

(40) Schroeder, E. M., Contr. Boyce Thomp. Inst. 7: 411-419, 1935.

(41) Barton, L. V., Contr. Boyce Thomp. Inst. 7: 379-404, 1935.

(42) Spaeth, J. N., Cornell Memoir 169, 1934.

(43) Herbst, Fred, Data obtained by Dr. M. T. Mann, Geneva, N. Y., 1935. Mimeographed.

(44) Crocker, Wm. and L. V. Barton, Contr. Boyce Thomp. Inst. 3: 385-404, 1931.

(45) Flemion, F., Contr. Boyce Thomp. Inst. 3: 413-440, 1931.

(46) Chadwick, L. C. Amer. Nurseryman 62: 3-9, 1935.

(47) Laurie, A. and L. C. Chadwick, The Modern Nursery, 1931.

(48) Davis, O. H., Florists' Exch. Nov. 13, 1926.

(49) Crocker, Wm., Florists' Rev. 65: 43-46, 1930.

(50) Bailey, L. H., The Nursery Manual, 1920.

(51) Rafn. J., Trans. R. Scottish Arboricultural Soc. 1901.

(52) Pennsylvania State Forest Nursery, unpublished data.

(53) Soil Conservation Service Data, Region I, 1937 Seed Crop.

(54) Sen Gupta, J. N., Indian Forest Rec. 2 (5) 1937.

(55) Jelley, M. E., Jour. Forestry, September 1937.

(56) Mississippi Extension Bull. 87, 1937.

(57) Giersback, J., Contr. Boyce Thomp. Inst. 9: 71-103, 1937.

(58) Soil Conservation Service Data Region 2, 1937 Seed Crop.

(59) Soil Conservation Service Data Region 7, 1937 Seed Crop.

KEY TO REFERENCES (Con't.)

(60) Mirov, N. T. and C. J. Kraebel. Collecting and Handling of the Seeds of California Wild Plants. Mimeo. 1937.

(61) Hutton & Porter, Iowa State Col. Jour. Sci. 12: 5-4, 1937.

(62) Pieters, A. J., Seedling Rates for Certain Field Crops, July 1937. Bureau of Plant Industry Mimeo. Publ.

(63) United States Department of Agriculture Circular No. 480. 1938.

(64) Soil Conservation Service Data, Region 4, 1938.

(65) Hiley, W. E. Improvement of Woodlands. London 1931.

(66) Nelson, M. L., Occasional Paper 78, So. For. Exp. Sta. 1938.

(67) New York State Conservation Dept., Notes on Forest Investigations.

(68) Barton, L. V. Contr. Boyce Thomp. Inst. 10: 221-233, 1939.

(69) MacKinney, A. L. and W. E. McQuilkin, Jour. Forestry 36: 1123-1127. 1938

(70) Flemion, F. Contr. Boyce Thomp. Inst. 9: 409-423, 1938.

(71) Stevens, O. A. Amer. Jour. Bot. 19: 784-794, 1938.

(72) Soil Conservation Service Data, Region 1, 1938.

(73) " " " " " 2, 1938.

(74) " " " " " 7, 1938.

(75) " " " " " 8, 1938.

(76) " " " " " 9, 1938.

(77) " " " " " 11, 1938.

(78) Schroeder, E. M. & Barton, L. V., Contr. Boyce Thomp. Inst. 10:235-255, 1939.

Note: SCS Data for 1938 includes some summarizations of previous records. In all cases, Regions indicated are those existing prior to 1939.

Name	Ref. No.	Lb.Seed 100 lb. Fruit	No.Clean Seeds per Pound	Time to Collect	Cutt Test %	Germ Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb.Seed
ABELIA (Abelia)	47							stratify	spring	
ABIES ARIZONICA (Corkbark fir)	1		45,000							
	46						dry	stratify 60 days at 41°F.		
	51		25,540			58				
ABIES BALSAMEA (Balsam fir)	1		56.249			25				
	2		65,000			24	dry,cool	none		
	8		59,000							
	25					40				
	31						36°F.car-		Oct.	
	43					14	boys	30 days at 43°F.		
	51		50,000			47				
	52									1,200
ABIES BRACHYPHYLLA (See A. homolepis)										
ABIES CEPHALONICA (Greek fir)	51		9,360		38	33				
ABIES CILICICA (Cilician fir)	51		7,800			40				
ABIES CONCOLOR (White fir)	1	8	16,000			36				
	8		13,450							
	22		24,000							
	25					48				
	43					67		30 days at 43°F.		
	51		14,550			67				
	52		15,200							
	77	10		fall	22		dry		spring	

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt Test %	Germ Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
ABIES DENSA (See A. spectabilis)										
ABIES FIRMA	8		10,900							
(Momi fir)	51		10,356			42				
ABIES FRASERI	1	4	44,000			68				
(Southern balsam fir)										
ABIES GRANDIS	1		34,064							
(Lowland white fir)	8		23,400							
	43					15		30 days at 43°F.		
	51		40,000			52				
	52		18,048							
	65		22,000							
ABIES HOMOLEPIS	51		15,534			23				
(Nikko fir)										
ABIES LASIOCARPA	1		51,262							
(Alpine fir)	10		37,228		76					
	51		39,020			32				
ABIES MAGNIFICA	1		67,000							
(California red fir)	23		67,200			68				
	51					52				
ABIES NOBILIS	1	5	10,008							
(Noble fir)										
ABIES NOBILIS GLAUCA	51		11,190			22				
(Blueleaf noble fir)										
ABIES NORDMANNIANA	7					45				
(Nordmann fir)	8		7,100							
	51		6,780			38				
	52		8,320							

Name	Ref. No.	Lb Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	sable Plants Lb. Seed
ABIES PECTINATA (Silver fir)	8		10,000							
	51		7,950			52				
	52		8,160							
ABIES PINDROW (Pindrow fir)	54		12,320	Oct.		13				740
ABIES PINSAPO (Spanish fir)	51		9,700			31				
ABIES SIBIRICA (Siberian fir)	7					50				
	8		42,090							
	10		30,706		48					
	51		47,060			27				
ABIES SPECTABILIS (Himalayan fir)	54		8,090	Sept.-Nov.						
ABIES SUBALPINA (See A. lasiocarpa)										
ABIES VEITCHI (Veitch fir)	51		46,955			59				
	54		60,000			10				
ABIES WEBBIANA (See A. spectabilis)										
ACACIA (Acacia)	47							2 days H_2O	soon as ripe	
	50							H_2O	soon as ripe	
ACACIA ARABICA (Gum arabic tree)	54		3,680	Feb.-May		63				880
ACACIA AURICULAEFORMIS	54		19,200	Mar.-Apr.		67				11,300
ACACIA BERLANDIERI (Guajillo)	64			spring-summer			dry			
ACACIA CATECHU	54		16,224	Dec.-Mar.		71				8,788

Name	Ref. No.	Lb.Seed 100 lb. Fruit	No.Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb.Seed
ACACIA CONSTRICTA (Mescat acacia)	17					45		hot H_2O		
ACACIA CYANOPHYLLA (Blue leaved wattle)	54		32,000	June		94				29,800
ACACIA DEALBATA (See A. decurrens dealabata)										
ACACIA DECURRENS (Green wattle)	54		36,000							20,900
ACACIA DECURRENS DEALBATA	54		39,200							
ACACIA FARNESIANA (Sweet acacia)	17					28				
	54		4,000	Feb.-July						
	75		9,171				dry	scarify		
ACACIA FERRUGINEA	54		2,560	Mar.-Apr.		90				2,250
ACACIA GREGGI (Long-flowered catclaw	17			July-Aug.		60		hot H_2O		
	64			July-Aug.			dry			
ACACIA LENTICULARIS	54		1,440	Jan.-Apr.		80				
ACACIA LEUCOPHLOEA	54		21,600	Jan.-June		28				5,800
ACACIA MODESTA	54		12,000	Jan.-Nov.		50				1,350
ACACIA SUNDRA	54		12,160	Feb.-May		58				10,900
ACALYPHA VIRGINICA	71		677,611							
ACANTHOPANAX	47							stratify	fall or spring	
	50							stratify	fall or spring	

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
ACANTHOPANAX DIVARICATUM	53		62,700	Sept.	98					
ACANTHOPANAX GIRALDI	53		60,400	Sept.	90					
ACER CAESIUM	54		5,440 (fruit)							
ACER CAMBELLI	54		12,400	Nov.-Dec.		75				3,150
ACER CAMPESTRE (Hedge maple)	8		5,636							
ACER CIRCINATUM (Vine maple)	77		5,530	fall	55			stratify	spring	
ACER DASYCARPUM (See A. saccharinum) (Silver maple)										
ACER GINNALA (Amur maple)	18 76		19,548 15,000	summer	60	52	cellar	stratify Dec.-Mar.	fall or spring	
ACER GLABRUM (Dwarf maple)	9 18		13,200 20,300		80					
ACER IBERICUM (See A. monspessulanum)										
ACER INSIGNE (Persian maple)	54		3,360							
ACER MACROPHYLLUM (Oregon maple)	1 22 60 77		2,752 3,360 3,200 3,360	 Sept.-Oct. fall	 87	 90 		 stratify 60 days stratify	 spring	
ACER MONSPESSULANUM	54		4,320 (fruit)							

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt Test %	Germ Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
ACER NEGUNDO (Boxelder)	1		13,600			77				
	2							stratify		
	7				78					
	8		11,181							
	9				87					
	12		14,000	Sept.		70		stratify		5,000
	15	34	12,000			70				
	18		10,368		85					
	23		14,720							
	25					50				
	32						dry	H_2O	fall or spring	
	75	75		fall	30		dry		early spring	260
	76		10,350	fall	85	80	cellar	stratify Dec.-Mar.	fall or spring	
ACER NIGRUM (Black maple)	72	100	4,250	fall	50		dry		fall	
ACER OBLONGUM	54		14,000 (fruit)	Jan.-Apr.						
ACER PALMATUM (Japanese maple)	8		35,227							
	46						cool, moist	stratify 90 to 120 days at 32-50°F.		
ACER PICTUM (Painted maple)	54		3,080 (Fruit)							
ACER PLATANOIDES (Norway maple)	1		1,272			94				
	4			fall						
	7					50				
	8		4,136							
	20							stratify immediately		
	74	42	4,487		85					
	77		6,000	fall	83			stratify	spring	

Name	No. [illegible]	Lb. [illegible] lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt Test %	Germ Test %	Type of Storage	Type of Treatment	Time to Plant	Usable [illegible]nts Lb. Seed
ACER PLATANOIDES VAR. SCHWEDLERI (Schwedler maple)	22		6,000							
ACER PSEUDOPLATANUS (Sycamore maple)	7					50				
	8		5,590							
ACER RUBRUM (Red maple)	1		18,420			72				
	8		38,181							
	12		18,500	spring		72			spring	
	15	100								
	25					43				
	32			spring before shrivel and fall			do not store	none	immediately	
	46						moist		immediately	
	50								soon as ripe	
	72			spring	90					
	73		18,000	spring		50	moist	none	immediately	
ACER SACCHARINUM (silver maple)	1		2,400							
	50			spring			must not dry		soon as ripe	
	72			spring		50				
ACER SACCHARUM (sugar maple)	1		7,130			58				
	8		3,363							
	12	100	7,100	Sept.		58		stratify		
	15		4,010		38					
	19	44								
	23		7,498			40				
	25					40				
	47						must not dry			
	72	60	5,780	fall	50		dry		fall	
	77		2,550		85			stratify	spring	

Name	Ref. No.	Lb.Seed 100 lb. Fruit	No.Clean Seeds per Pound	Time to Collect	Cutt Test %	Germ Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb.Seed
ACER TATARICUM (Tatarian maple)	3	75	15,000	Sept.				stratify		
	7					55				
	9				91					
	11		18,160		92					
ACHILLEA MILLEFOLIUM	71		1,135,000							
ACNIDA TUBERCULATA	71		2,389,473							
ACORUS CALAMUS (Sweetflag)	6			Aug.		54		210 days H_2O at 35° F.		
ACRICARPUS FRAXINIFOLIUS	54		11,200	Mar.-June		49				1,100
ACTINIDIA (Actinidia)	26								fall or spring	
	47							none	spring	
	50							none	spring	∞
ADENOSTOMA FASCICULATUM (Chamise)	60		413,000	May-Sept.		75		10% H_2SO_4 ¼ hr.		
ADENOSTOMA SPARSIFOLIUM (Redshanks)	60		400,000	May-June		40		10% H_2SO_4 ¼ hr.		
ADINA CORDIFOLIA	54		5,001,600	Oct.-June		90				
AEGLE MARMELOS	54		2,400	Mar.-May						
AELUROPUS LITORALIS	75			June		77	dry	none	spring	
AESCULUS (Horsechestnut)	32						must not dry	stratify	fall or spring	
	47							stratify	fall or spring	
	50							stratify	spring	
	72			fall						

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt Test %	Germ Test %	Type of Storage	Type of Treatment	Time to Plant	Plants Lb. Seed
AESCULUS CALIFORNICA (California buckeye)	60		10	Nov.	75					
AESCULUS INDICA	54		18	Sept.-Oct		81				
AESCULUS OCTANDRA (Yellow buckeye)	1					49				
AESCULUS PUNDUANA	54		20							
AFZELIA BIJUGA	54		260			57				
AGATHIS AUSTRALIS (Kauri-pine)	54		29,600							
AGLAIA ROXBURGHIANA (See A. undulata)										
AGLAIA UNDULATA	54					72				
AGOSERIS HETEROPHYLLA	60		722,000			20		none		
AGOSERIS RETRORSA	60		224,000	May		20		none		
AILANTHUS ALTISSIMA (Ailanthus)	1					56				
	3			Sept.						
	7				75					
	8	88	17,000				dry			
	12	1	14,000	Aug.		56		stratify		
	26							stratify or dry		
	32							none	spring	
	37	58								2,000
	47							stratify	spring	
	50						dry	none	soon as rip-	
	72			fall			dry		fall or spring	1,800
	75	30		fall & winter	87		dry	none	spring	1,200
	77		15,600	fall	85		dry	none or stratify	fall or spring	980

Name	Ref. No.	Lb.Seed 100 lb. Fruit	No.Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb.Seed
AILANTHUS EXCELSA	54		4,320	May						
AILANTHUS GLANDULOSA (See A. altissima)										
AILANTHUS GRANDIS	54		544	Nov.-Jan.		45				
ALBIZZIA (Albizzia)	47							H_2O 1 day	soon as ripe	
	50							H_2O	soon as ripe	
ALBIZZIA AMARA	54		6,560	Feb.-Apr.		79				2,665
ALBIZZIA JULIBRISSIN (Silktree)	12	40	11,000	Nov.		80	dry	scarify		
	32						dry	H_2O	spring	
	73			early fall			dry	scarify	fall or spring	
ALBIZZIA LEBBEK (Woman's tongue tree)	54		4,480	Nov.-Feb.		88				2,775
ALBIZZIA LOPHANTHA	54		6,720							2,200
ALBIZZIA LUCIDA	54		6,800	Feb.-Apr.		42				
ALBIZZIA MARGINATA (See A. stipulata)										
ALBIZZIA MOLUCCANA	54		19,200	May-June						5,400
ALBIZZIA ODORATISSIMA	54		6,928			30				3,300
ALBIZZIA PROCERA	54		9,360	Jan.-Apr.		68				5,000
ALBIZZIA STIPULATA	54		21,200	Dec.-Mar.		45				
ALEURITES FORDI (Tung-oil tree)	54		180	Nov.		31				39
	56	56	1,850 per bu.	fall			dry		Feb.	
ALEURITES MOLUCCANA (Candlenut-tree)	54		67	Nov.						

Name	Ref. No.	Lb. Seed 100 Lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
ALISMA PLANTAGO-AQUATICA	6			Oct.		86		180 days H_2O at 35°F.		
(Waterplantain)	71		825,454							
ALLIONIA NYCTAGINEA	71		71,496							
ALNUS	32						dry	none	spring	
(Alder)	47							none	fall or spring	
	50						dry	none	spring	
ALNUS CORDIFOLIA	8		202,727							
ALNUS GLUTINOSA	8		256,000							
(European alder)	51				15					
	54		409,600							
ALNUS INCANA	2		450,000	fall				stratify		
(Speckled alder)	8		480,000							
	18		675,000							
	51				27					
	54		574,400			24				
	72			fall	75					
ALNUS NEPALENSIS	54		519,200			70				16,800
ALNUS NITIDA	54		401,600	Nov.-Dec.						
ALNUS RHOMBIFOLIA (White alder)	60		687,000	May-Oct.		56		none		
ALNUS RUBRA	1		363,200			40				
(Red alder)	60		1,087,000	May-July		14		none		
	77		614,400	fall	15				spring	
ALNUS RUGOSA (Smooth alder)	72			fall						

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt Test %	Germ Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
ALNUS TENUIFOLIA (Mountain alder)	60		675,000	Aug.-Sept.		16		none		
ALNUS VIRIDIS (European green alder)	43				46	29		30 days at 43°F.		
ALNUS VIRIDIS VAR. SINUATA (Thin-leaf alder)	60		2,021,000	Aug.-Sept.		12		none		
ALSEODAPHNE OWDENI	54		130							
ALSTONIA SCHOLARIS	54		300,800							
ALTINGIA EXCELSA	54		522,400	Oct.-Dec.		15				
AMARANTHUS BLITOIDES	71		477,894							
AMARANTHUS GRAECIZANS (Tumbleweed)	71		1,973,913							
AMARANTHUS RETROFLEXUS	71		1,194,736							
AMBROSIA ARTEMISIFOLIA	71		114,936							
AMBROSIA TRIFIDA	71		26,091							
AMELANCHIER (Serviceberry)	50							stratify	soon as ripe	
	53		70,200							
AMELANCHIER ALNIFOLIA (Saskatoon shadblow)	3	2	63,000	July				stratify		
	18		112,650							
	77		51,300	early summer	74		dry	stratify 140 days at 40°F.	spring	2,380
AMELANCHIER BAKERI (Green serviceberry)	19		31,550							

Name	Ref. No.	Lb.Seed 100 lb. Fruit	No.Clean Seeds per Pound	Time to Collect	Cutt Test %	Germ Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb.Seed
AMELANCHIER BASALTICOLA	77	12	57,200	early summer	81			stratify 140 days at 40°F.	spring	
AMELANCHIER CANADENSIS (Canada serviceberry)	2			July				stratify		
	12	.33	50,000	June		70		stratify		
	19	30								
	44					38	dry	dry 90 days or stratify		
	47							stratify 90 days at 32-50°F.	soon as ripe	
	49							stratify 90 days at 31-41°F.		
	53		69,400							
	58				86					
	72	1	67,200	June	95					
AMELANCHIER HUMILIS (Small serviceberry)	3	2	63,000	July				stratify		
AMELANCHIER INTERMEDIA (See A. oblongifolia)										
AMELANCHIER OBLONGIFOLIA (Thicket shadblow	53		69,550	June	97					
AMOORA ROHITUKA	54		880	May-June						
AMOORA WALLICHI	54		71	May-June		66				
AMORPHA (False indigo)	47							none	soon as ripe	
AMORPHA ANGUSTIFOLIA (See A. fruticosa)										
AMORPHA CALIFORNICA (California indigobush)	60		38,000	July-Sept.		42		none		

Name	Ref. No.	Lb.Seed 100 lb. Fruit	No.Clean Seeds per Pound	Time to Collect	Cutt Test %	Germ Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb.Seed
AMORPHA CANESCENS	13					76				
(Leadplant)	17					30				
	18		105,759							
	53		92,800							
	72		87,900	late summer	99		dry		fall	22,400
AMORPHA CYANOSTACHYA (See A. fruticosa)										
AMORPHA FRAGRANS	13					96				
	18		115,800							
AMORPHA FRUTICOSA	12	100	55,000	Aug.	85	60	dry			
(False-indigo)	16				48					
	17				60					
	18		55,000		90					
	20				70			stratify	Nov.	
	32						dry	none or soak	spring	
	35					68	dry	none		
	37	63	54,013							
	59				75	42				1,051
	61					73		shake 10 minutes		
	72		57,000	late summer			dry		fall	
	73		61,824		40		dry	none	spring	4,300
	74	63	60,834	fall	92	61	dry	H_2O 7 days	spring	1,051
	76		55,000	fall	90	75	dry	none or stratify	spring	125
	77		67,200	fall	76		dry	Inoculate	spring	5,600
AMORPHA GLABRA	72		65,400	late summer			dry		fall	17,000
AMORPHA MICROPHYLLA	9		59,682		86					
(Dwarf-indigo)	17					50				
AMORPHA NANA (See A. microphylla)										
AMORPHA TENNESSEENSIS	72		79,700	late summer			dry		fall	27,000

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
AMPELOPSIS CORDATA (See Cissus ampelopsis)										
AMPELOPSIS HETEROPHYLLA	72		73,400	fall						
AMPELOPSIS QUINQUEFOLIA (See Parthenocissus quinquefolia)										
AMYGDALUS PERSICA	26							stratify	fall or stratify	
	46						Clean and dry	stratify 60-90 days at 35-45°F. or soak, remove outer & inner coats and sow immediately		
ANACARDIUM OCCIDENTALE (Cashew)	54		85	Mar.-June		98				65
ANDROMEDA (Bog-rosemary)	26						dry		fall or spring soon as ripe under glass	15
	50									
ANEMONE CANADENSIS	71		139,692							
ANISOPTERA GLABRA	54		330 (fruits)	May-June		55				
ANOGEISSUS ACUMINATA	54		17,600	Apr.-May						
ANOGEISSUS LATIFOLIA	54		53,600	Dec.						2,150
ANOGEISSUS PENDULA	54		69,600	Dec.-Jan.						140
ANTHOCEPHALUS CADAMBA (See A. moringaefolius)										

Name	Ref. No.	Lb.Seed 100 lb. Fruit	No.Clean Seeds per Pound	Time to Collect	Cutt Test %	Germ Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb.Seed
ANTHOCEPHALUS MORINDAEFOLIUS	54		681,000	May-Oct.						2,500
APDOPAPPUS BLOOMERI (Bloomer goldenbush)	60		233,000	Sept.-Oct.		50		none		
APLOPAPPUS ERICOIDES (Mock-heather)	60		718,000	Oct.-Nov.		80		none		
APLOPAPPUS NAUSEOSUS (Rubber goldenbush)	60		335,000	Oct.-Nov.		36		none		
APLOPAPPUS PARISHI (Parish goldenbush)	60		1,633,000	Oct.-Nov.		95		none		
APLOPAPPUS PINIFOLIUS (Pineleaf goldenbush)	60		1,000,000	Oct.-Nov.		48		none		
APLOPAPPUS SQUARROSUS (Coast goldenbush)	60		173,000	Aug.-Oct.		80		none		
APOCYNUM HYPERICIFOLIUM	71		648,571							
AQUILARIA AGALLOCHA	54		9,280							
ARABIS HIRSUTA	71		7,566,066							
ARALIA (Aralia)	47			spring				stratify	soon as ripe	
ARALIA SPINOSA (Hercules club)	72	11	105,000	late summer		80				
ARAUCARIA CUNNINGHAMI	54		1,728			12				
ARBUTUS MENZIESI (Madrone)	26			fall				stratify	fall or stratify	
	60		2,000 (dry fruits)	Oct.-Dec.		55		stratify 90 days		
ARCTIUM MINUS	71		60,533							

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
ARCTOSTAPHYLOS PATULA (Greenleaf manzanita)	60		1,700 (dry fruits)	Aug.-Oct.				stratify 90 days		
ARCTOSTAPHYLOS PUNGENS (Pointleaf manzanita)	17					34				
ARCTOSTAPHYLOS UVA-URSI (Bearberry)	46						clean	stratify 140 days at 41-50°F.		
	57			June		75		treat entire stones H_2SO_4 3-5 hrs.	immediately	
	77	12	26,600	fall						
ARISTOLOCHIA	47							stratify 140 days at 50°F.	fall or spring	
ARISTOLOCHIA MACROPHYLLA	(See A. sipho)									
ARISTOLOCHIA SIPHO (Dutchmans-pipe)	8		18,272							
ARONIA (Chokeberry)	47							stratify 90 days at 32-41°F.		
	50									
	53		184,160		88			stratify	fall	
ARONIA ARBUTIFOLIA (Red chokeberry)	15		7,355 (dry berries)		70					
	19	32								
	44					90		stratify 60-120 days at 34°F.		
	46						clean and dry	stratify 90 days at 32-41°F.		
	72	4	256,000	late fall						
ARONIA FLORIBUNDA (Purple-fruited chokeberry)	44					92		stratify 60 days at 34°F.		
	47						clean and dry	stratify 60 days at 32-35°F.		

Name	Ref. No.	Lb.Seed 100 lb. Fruit	No.Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb.Seed
ARONIA MELANOCARPA (Black chokeberry)	19 72	24 8	233,208	early fall	96					
ARTEMISIA ARBUSCULA (Low sagebrush)	17					24				
ARTEMISIA AROMATICA	17					52				
ARTEMISIA BIENNIS	71		6,053,333							
ARTEMISIA CAUDATA	71		4,540,000							
ARTEMISIA FILIFOLIA (Sand sagebrush)	17					56				
ARTEMISIA TRIDENTATA (Sagebrush)	17					32				
ARTOCARPUS CHAPLASHA	54		555	June-Aug.		88				230
ARTOCARPUS HIRSUTA	54		640	May-July		80				470
ARTOCARPUS INTEGRIFOLIA	54		30	May-July		75				
ARTOCARPUS LAKOOCHA	54		1,280	July						1,050
ARUM (Arum)	50			fall				stratify	soon as ripe or stratify	
ASCLEPIAS MEXICANA (Narrow-leaf milkweed)	60		72,000	Aug.-Oct.		96		none		
ASCLEPIAS SYRIACA	71		108,095							

Name	Ref. No.	Lb.Seed 100 lb. Fruit	No.Clean Seeds per Pound	Time to Collect	Cutt Test %	Germ Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb.Seed
ASIMINA TRILOBA (Papaw)	13		1,200			50				
	32						Must not dry	stratify	fall or spring	
	47							none	soon as ripe	
	50						Must not dry	stratify	fall or spring	
	72	11		fall	90					
ASTARAGUS OFFICINALIS (Asparagus)	17			summer fall		76	dry	none	April	
	37	60								
	50						dry	none	spring	
	74		21,115		99	97	dry	none	spring	5,010
	75		24,198	April			dry	none	May	
ASTER CANESCENS	60		821,000	June		14		none		
ASTRAGALUS ANTISELLI (Locoweed)	60		183,000	June		23		none		
ASTRAGALUS CHINENSIS	75						dry	scarify		
ASTRAGALUS CRASSICARPUS	71		146,451							
ASTRAGALUS FLEXUOSUS	71		336,296							
ASTRAGALUS MORTONI	75						dry	scarify		
ASTRAGALUS NUTTALLIANUS	64			spring			dry		fall	
ASTRAGALIS RIBUI	77			Sept.		55	dry	scarify	early spring	
ATRIPLEX ARGENTEA	71		60,533							

Name	Ref. No.	Lb.Seed 100 lb. Fruit	No.Clean Seeds per Pound	Time to Collect	Cutt Test %	Germ Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb.Seed
ATRIPLEX CANESCENS (Wingscale)	13					22				
	17			fall		43				
	22	(1935)	25,600							
	22		10,500							
	77		18,050	late summer	10					
ATRIPLEX COLLINA (See A. confertifolia)										
ATRIPLEX CONFERTIFOLIA (Shadscale)	13					0				
	17					21				
	77		15,200	late summer						
ATRIPLEX CUNEATA	17					42				
ATRIPLEX GARRETTI (See A. canescens)										
ATRIPLEX HALIMUS	17				4					
ATRIPLEX HASTATA	71		908,000							
ATRIPLEX HORTENSIS (Garden orach)	13				97					
	17				46					
ATRIPLEX JOHNSTONI (Johnston saltbush)	60		63,000	May-July	22			none		
ATRIPLEX LENTIFORMIS (Big saltbush)	17					34				
	21		412,300							
ATRIPLEX LINEARIS (See A. canescens)										
ATRIPLEX NUTTALI	13					65				
ATRIPLEX PATULA	71		211,162							

Name	Ref. No.	Lb.Seed 100 lb. Fruit	No.Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb.Seed
ATRIPLEX POLYCARPA (Cattle spinach)	17					62				
ATRIPLEX ROSEA	71		151,333							
ATRIPLEX SEMIBACCATA (Australian saltbush)	17					78				
	21		92,500							
	60		75,000	July-Oct.		64		none		
AUCUBA	47							none	soon as ripe	
	50								soon as ripe	
AVICENNIA OFFICINALIS	54		62 (fruits)	Aug.-Oct.						
AXYRIS AMARANTHOIDES	71		412,727							
AZADIRACHTA INDICA (See Melia azadirachta)										
AZALEA OCCIDENTALIS	60		4,000,000	July-Sept.		75				
BACCHARIS	47							none	fall or spring	
BACCHARIS PILULARIS (Kidneywort)	60		8,200,000	Sept.-Nov.				none		
BACCHARIS SAROTHROIDES (Rosinbrush)	17					64				
BACCHARIS VIMINEA (Mule fat)	60		5,000,000	May		75				
BACCHARIS SP.	75			June			dry	none	June	3,000 (Unclean)

Name	Ref. No.	Lb.Seed 100 lb. Fruit	No.Clean Seeds per Pound	Time to Collect	Cutt Test %	Germ Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb.Seed
BALANOCARPUS UTILIS	54		96(fruits)	Nov.-Dec.		67				
BAMBUSA ARUNDINACEA (See Nastus barbonicus)										
BAMBUSA NUTANS	54		8,480							
BAMBUSA POLYMORPHA	54		12,000							
BAMBUSA TULDA (See B. tuldoides)										
BAMBUSA TULDOIDES	54		10,000	Jan.		39				
BARRINGTONIA ACUTANGULA	54		640	Dec.						
BASSIA BUTYRACEA	54		420	June-July						51
BASSIA ELLIPTICA	54		105	July-Aug.		53				75
BASSIA LATIFOLIA	54		192	June-July						
BASSIA LONGIFOLIA	54		192	June						
BASSIA POLYANTHA	54		3,120	Apr.-May		75				
BAUHINIA GALPINI	54					64				
BAUHINIA MALABARICA	54		5,120	Jan.-May						
BAUHINIA PURPUREA	54		2,080	Jan.-May		91				1,920
BAUHINIA RACEMOSA	54		3,520	Jan.-Mar.		77				2,450
BAUHINIA RETUSA	54		690	May		82				
BAUHINIA VARIEGATA (Buddhist Bauhinia)	54		1,440	Apr.-May		94				

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
BEBBIA JUNCEA	60		748,000	June		30		none		
BELAMCANDA (Blackberry-lily)	47							stratify 90 days at 41-50°F.		
BELOPERONE CALIFORNICA	60		47,000	June		96		none		
BENZOIN AESTIVALE (Spicebush)	15	16								
	19	23	4,536							
	26			fall			Must not dry	stratify	fall	
	40					83		stratify 77°F. 30 days; then 90 days at 34-50°F.		
	47							none	soon as ripe	
BERBERIS (Barberry)	47								soon as ripe or stratify	
	50							stratify	soon as ripe or stratify	
BERBERIS AMURENSIS (Amur barberry)	15		39,000							
	72		39,250	late fall			dry		fall or spring	5,800
BERBERIS AQUIFOLIUM (Oregon hollygrape)	22		38,409							
	77	8	43.035	Sept.	99					
BERBERIS CANADENSIS LEICHTLINI	72		52,860	late fall			dry		fall or spring	1,200
BERBERIS CHINENSIS AMURENSIS	72		40,320	late fall			dry		fall or spring	6,000

Name	Ref. No.	Lb.Seed 100 lb. Fruit	No.Clean Seeds per Pound	Time to Collect	Cutt Test %	Germ Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb.Seed
BERBERIS DECLINATA OXYPHYLLA	15		68,240	late fall			dry		fall or spring	4,600
BERBERIS DIELSIANA	15		55,550	late fall			dry		fall or spring	2,700
BERBERIS DUROBRIVENSIS	15		68,922	late fall			dry		fall or spring	3,600
BERBERIS EMARGINATA BRITZENSIS	15		27,136	late fall			dry		fall or spring	6,000
BERBERIS FREMONTI (Fremont barberry)	17					81		none		
BERBERIS HAEMATOCARPA (Red hollygrape)	18		102,550							
BERBERIS LEICHLINA	15		52,860							
BERBERIS MACRANTHA	15		56,176	late fall			dry		fall or spring	2,000
BERBERIS MEEHANI	15		65,400	late fall			dry		fall or spring	6,100
BERBERIS NERVOSA (Longleaf hollygrape)	77	12	29,640		95					
BERBERIS NEVINI	60		57,000	June				stratify 90 days		
BERBERIS OBLONGA	15		38,528	late fall			dry		fall or spring	2,200
BERBERIS POIRETI	15		83,328	late fall			dry		fall or spring	2,600

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
BERBERIS THUNBERGI (Japanese barberry)	12	25	28,000	winter				stratify		
	15		28,000	fall				stratify		
	19	16						stratify 35-60 days at 41°F.	fall or stratify	3,500
	20				91			stratify	April	
	46						clean and dry	stratify 15-30 days at 32-41°F.	April	
BERBERIS VERNAE	72			early fall			dry		fall or spring	2,000
BERBERIS VULGARIS (Common barberry)	15		41,216	late fall			dry		fall or spring	9,000
BERBERIS VULGARIS ATROPURPUREA (Purple barberry)	15		34,048							25
BERRIA AMMONILLA	54		8,000	Apr.-June						4,000
BERTEROA INCANA	71		1,008,888							
BETA VULGARIS (Beet)	62		24,300							
	63		24,480							
BETULA	26			early fall			Must not dry	stratify	soon as ripe	
							Must not dry	stratify	soon as ripe	
BETULA ALNOIDES	54		380,500	Jan.-June		34				
BETULA CYLINDROSTACHYA (See B. alnoides)										
BETULA FONTINALIS (Red birch)	9		1,134,000							
	13					82				
	60		4,000,000	July-Aug.		16		none		

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt Test %	Germ Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
BETULA LENTA (Sweet birch)	1		488,400			26				
	8		613,036							
	23					62				
	46						dry, room temperature	stratify 60 days at 32-50°F.		
	51					3				
BETULA LUTEA (Yellow birch)	1		409,000							
	8		478,181							
	23					72				
	46						sealed, dry room temperature	stratify 60 days at 32-50°F.		
	47								early summer	
	51					23				
BETULA NIGRA (River birch)	2			June					immediately	
	51					10				
BETULA PAPYRIFERA (Paper birch)	1		711,080			21				
	2			fall			dry, cold			
	13					25				
	18		668,218							
	46						dry, tight room temperature or cooler	stratify 60-70 days at 32-50°F.		
	51					30				
BETULA POPULIFOLIA (White birch)	46						dry, tight room temperature or cooler	stratify 60 days at 32-50°F.		

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt Test %	Germ Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
BETULA VERRUCOSA	51					39				
BIDENS ACUTA	71		263,953							
BIDENS FRONDOSA	71		129,714							
BIDENS VULGATUS	71		89,019							
BIGONIA RADICANS (Trumpetcreeper)	52 60			Oct. late summer			dry	none	spring	
BISCHOFIA JAVANICA	54		43,760	June-Jan.		56				
BISCHOFIA TRIFOLIATA (See B. javanica)										
BOCAGEA ELLIPTICA	54		384 (fruit)							
BOEHMERIA RUGULOSA	54			June		6				
BOLTONIA ASTEROIDES	71		2,063,630							
BOMBAX ANCEPS	54		4,960			10				
BOMBAX INSIGNE	54		6,400	April						1,800
BOMBAX MALABARICUM (Malabar bombax)	54		14,640	Mar.-May		48				2,370
BOSWELLIA SERRATA	54		6,400	May-June		28				
BRASSICA ARVENSIS	71		172,952							
BRASSICA JUNCEA	71		172,952							
BRASSICA NAPUS (Rape)	62 63		104,000 104,320							

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt Test %	Germ Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
BRASSICA NIGRA (Black mustard)	60 71		292,000 207,058	June		91		none		
BRASSICA RAPA (Turnip)	62 63		154,000 154,240							
BRAUNERIA ANGUSTIFOLIA	71		181,600							
BRICKELLIA CALIFORNICA	60		599,000	Aug.-Oct.		36		none		
BRICKELLIA INCANA	60		171,000	May-June		52		none		
BRICKELLIA SQUAMULOSA	54					0				
BRIDELIA RETUSA	54		6,000	Jan.-Apr.						5,750
BROUSSONETIA PAPYRIFERA (Paper mulberry)	50								soon as ripe or second spring	
	54		244,800	June-Sept.		1				
BUCHANANIA LATIFOLIA	54		1,760	May-June		10				
BUCKLANDIA POPULNEA	54		123,200	year		75				42,000
BUMELIA LANUGINOSA (Gum elastic)	3 4 37	20 25	5,000	Oct. fall			dry dry	20 minutes H_2SO_4		
BURSA BURSA-PASTORIS	71		4,729,166							
BURSERA SERRATA (See Protium serratum)										
BUTEA FRONDOSA	54		512	May-June		88				415

Name	Ref. No.	Lb.Seed 100 lb. Fruit	No.Clean Seeds per Pound	Time to Collect	Cutt Test %	Germ Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb.Seed
BUTOMUS UMBELLATUS (Flowering rush)	6			Sept.		64		210 days H_2O at 35°F.		
BUXUS (Box)	26			fall			Must not dry	soak and stratify		
	47 50							soak and stratify	spring soon as ripe	
BUXUS SEMPERVIRENS (Common box tree)	7					82				
	8		34,727							
	26							stratify	fall or spring	
	54		31,200	Sept.-Oct.		6				
BUXUS WALLICHIANA	54		1,150							

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
CAESALPINIA	50							soak hot H_2O		
CAESALPINIA CORIARIA (Divi-divi)	54		16,000							6,550
CAESALPINIA DIGYNA	54		640							260
CAESALPINIA GILLIESI	14					62				
CAESALPINIA SAPPAN (Sappan)	54		64 (fruits)							
CALLA PALUSTRIS (Calla)	6			Sept.		72		150 days H_2O at 35°F.		
CALLIANDRA ERIOPHYLLA (False mesquite)	14					100		hot H_2O		
	17					64				
	75			spring			dry	none	May	
CALLIANDRA HUMILIS	14					86		30 minutes H_2SO_4		
	17					20				
	75		23,700	Oct.			dry	none	late spring	
CALLICARPA (Beautyberry)	26			fall				stratify	fall or stratify	
	47							none	fall	
CALLICARPA AMERICANA (French mulberry)	12	20	85,000	Sept.		90		stratify		
	58					8				
	73	30	275,000	fall	20	5	dry or stratify	depulp	spring	
CALLICARPA PURPUREA (Chinese beautyberry)	73			fall	80		dry		winter	
CALLUNA VULGARIS (Heather)	26			fall			dry	none	fall or spring under glass	

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt Test %	Germ Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
CALOPHYLLUM INOPHYLLUM	54		62 (fruit)	Mar.						
CALOPHYLLUM POLYANTHUM	54		1,920	Apr.-May		85				
CALOPHYLLUM TOMENTOSUM	54		69 (fruit)			9				6 (fruit)
CALYCANTHUS (Sweetshrub)	26						dry		spring	
	47							none	spring	
	50							none	spring	
CALYCANTHUS FERTILIS FERAX	72			fall		99	acid peat	stratify 95 days at 41°F.	spring	1,000
CALYCANTHUS FLORIDUS (Carolina allspice)	72			fall	92		dry		spring	1,180
CALYCANTHUS OCCIDENTALIS (California sweetbrush)	60		8,000	Sept.-Oct.		82		none		
CAMELINA DENTATA	71		171,320							
CAMELINA MICROCARPA	71		1,650,909							
CAMELINA SATIVA	71		454,000							
CAMELLIA (Camellia)	26			summer			moist	stratify	fall or spring	
	47							hot H_2O	spring	
CAMPANULA BARBATA	78					95	dry		fall	
CAMPANULA GARGANICA	78					80	dry		fall	
CAMPSIS RADICANS (See Bignonia radicans)										
CANARIUM BENGALENSE	54		56			63				

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt Test %	Germ Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
CANARIUM EUPHYLLUM	54		215	April		24				
CANARIUM SIKKIMENSE	54		160							
CANARIUM STRICTUM	54		88	Jan.		47				
CANNABIS SATIVA (Common hemp)	50						dry	none	spring	
	62		27,454							
CAPPARIS APHYLLA	54		7,840	June		92				2,750
CARAGANA (Pea-shrub)	47							2 days H_2O	spring	
CARAGANA ARBORESCENS (Siberian pea-tree)	3	20	16,500	July			dry		fall or early spring	
	4			June						
	7					78				
	8		15,000							
	12		21,840	Aug.	99		dry	H_2O		
	13					75				
	14					78				
	17					76				
	18		16,338		98					
	22		19,200							
	37	20								
	50						dry	H_2O	fall or spring	
	51		14,900			93				
	53		19,200	summer	99		dry		fall or spring	9,500
	74				99	60	dry	none	spring	896
	76	13	20,000	July	98	92	dry	none	spring or summer	4,837

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt Test %	Germ Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
CARAGANA ARBORESCENS	77	14	19,120	early summer	99	76	dry	Inoculate	spring	2,650
CARAGANA AURANTIACA	53		44,000	summer	99					
CARAGANA FRUTEX	72		21,400	summer	99					
CARAGANA GRANDIFLORA	53		89,600	summer	97		dry		spring	17,000
CARALLIA LUCIDA	54		8,960	July-Sept.		13				
CARAPA MOLUCCENSIS	54		25	July						
CAREX FESTUCACEA	71		349,230							
CAREX VULPINOIDEA	71		1,297,142							
CAREYA ARBOREA	54		1,280	Dec.-Jan.						
CARICA PAPAYA (Papaya)	46						clean and dry	stratify 100 days at 32-50°F.	immediately	
CARPENTERIA CALIFORNICA (Carpenteria)	47							none	spring	
	60		15,020,000	Sept.-Oct.		80		none	spring	
CARPINUS (Hornbeam)	26			fall			dry or moist	stratify	fall or spring	
	47							stratify	soon as ripe or stratify	
	50								fall	
CARPINUS BETULUS (European hornbeam)	7					50				
	8		5,545							
CARPINUS CAROLINIANA (Hornbeam)	26							stratify	fall or spring	
	72		30,200	fall	96					

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt Test %	Germ Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
CARPINUS FAGINEA	54		69,600							
CARPINUS JAPONICA (Japanese hornbeam)	46						dry	stratify 90-120 days at 35-45°F.		
CARYA (See Hicoria)										
CASSIA ARTEMISIOIDES (Wormwood senna)	21		30,400							
CASSIA AURICULATA	54			Feb.-Mar.						
CASSIA FASCICULATA	74	17								
CASSIA FISTULA (Golden-shower)	54		2,880	Jan.-May		35				550
CASSIA GLAUCA	54			Dec.-Feb.						1,050
CASSIA LEPTOCARPA	17					2				
CASSIA MARGINATA	54		2,240	Feb.-May						
CASSIA MARYLANDICA	26			early fall			dry	none	spring	
CASSIA OCCIDENTALIS	54		24,000	Nov.		5				
CASSIA SIAMEA	54		15,800	Mar.-Apr.		98				14,600
CASSIA TOMENTOSA (Woolly senna)	4		20,400							
CASSIA TORA	54		17,600	Nov.-Jan.		41				
CASSIA WISLIZENI	14					40				

Name	Ref. No.	Lb.Seed 100 lb. Fruit	No.Clean Seeds per Pound	Time to Collect	Cutt Test %	Germ Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb.Seed
CASTANEA (Chestnut)	32						moist	stratify	fall or spring	
	50						dry few days, then moist	stratify not too wet	spring	
CASTANEA DENTATA (American chestnut)	1		131			74				
CASTANEA MOLLISSIMA (Hairy chestnut)	15		75			60		stratify		20
CASTANEA PUMILA (Chinquapin)	72	90	400	fall	95					
CASTANEA SATIVA (Spanish chestnut)	8		95							
CASTANOPSIS CHRYSOPHYLLA VAR. MINER (Giant chinquapin)	60		700	Sept.		50		none		
CASTANOPSIS HYSTRIX	54		305	Sept.-Dec.		25				
CASTANOPSIS INDICA	54		88	May						
CASTANOPSIS SEMPERVIRENS (California chinquapin)	60		1,200	Sept.-Oct.		30		none		
CASTILLEJA SESSILIFLORA	71		1,540,000							
CASUARINA EQUISETIFOLIA (Horsetail tree)	54		344,000	June-Dec.						
CATALPA (Catalpa	26						dry	none	spring	
	47							stratify	spring	

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt Test %	Germ Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
CATALPA BIGNONIOIDES	43					46		30 days at 60°F.		
(Common catalpa)	77		28,148	Sept.						
CATALPA SPECIOSA	1		19,500			85				
(Western catalpa)	3	26	23,600	fall			50°F., dry	dry or soak		
	4			fall						
	12	25	20,000	fall		80	dry			6,500
	16		19,212			94				
	17					78				
	18		21,950		75					
	20						dry	none	spring	
	23		19,680			58				
	37	34	25,193							
	59				82	90				1,238
	73									3,400
	74	35	22,584	fall	94	60	dry	none	spring	1,770
	75	28	19,000	fall or winter	86		dry	none	spring	1,744
CEANOTHUS	47							stratify	spring	
(Ceanothus)	50						dry	none	spring	
CEANOTHUS AMERICANUS	26			fall			dry	none	spring	
(Jersey-tea Ceanothus	72	30	114,000	late	93		dry		fall or spring	13,500
CEANOTHUS ARBOREUS	21		47,700							
(Island myrtle)	60		50,000	May-June		87		hot water		
CEANOTHUS CORDULATUS	60		141,000	July-Sept.		65		hot H_2O; stratify 90 days		
(White thorn)										
CEANOTHUS CRASSIFOLIUS	21		33,100							
(Deerbrush)	60		65,000	May-June		45		hot H_2O		
CEANOTHUS CUNEATUS	21		54,000							
(Wedgeleaf hornbrush)	60		56,000	Apr.-June		81		hot H_2O		

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt Test %	Germ Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
CEANOTHUS CYANEUS	60		79,000	June-Aug.		35		hot H_2O; stratify 90 days		
CEANOTHUS DENTATUS (Cropleaf ceanothus)	60		95,000	June-July		88		hot H_2O; stratify 90 days		
CEANOTHUS DIVARICATUS (Wild-lilac)	21 60		75,900 73,000	July-Aug.		45		hot H_2O; stratify 90 days		
CEANOTHUS DIVERSIFOLIA (Trailing ceanothus)	60		84,000	June-July		61		hot H_2O; stratify 90 days		
CEANOTHUS FENDLERI (Fendler soapbloom)	17					16				
CEANOTHUS FOLIOSUS (Wavyleaf ceanothus)	60		183,000	May-July		50		hot H_2O; stratify 90 days		
CEANOTHUS INCANUS (Coast white thorn)	60		92,000	May-July		88		hot H_2O; stratify 90 days		
CEANOTHUS INTEGERRIMUS (Deer brush)	60		58,000	June-July		71		hot H_2O; stratify 90 days		
CEANOTHUS JEPSONII (Jepson ceanothus)	60		43,000	June-July		35		hot H_2O 90 days		
CEANOTHUS MACROCARPUS (Big-pod ceanothus)	60		15,000	May-June		90		hot H_2O		
CEANOTHUS OLIGANTHUS (Hairy ceanothus)	60		73,000	May-June		62		hot H_2O		
CEANOTHUS PAPILLOSUS	21 60		200,200 102,000	May-June		74		hot H_2O; stratify 90 days		

Name	Ref. No.	Lb.Seed 100 lb. Fruit	No.Clean Seeds per Pound	Time to Collect	Cutt Test %	Germ Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb.Seed
CEANOTHUS PARRYI (Lady-bloom)	60		155,000	July		75		hot H_2O; stratify 90 days		
CEANOTHUS PARVIFOLIUS (Littleleaf ceanothus	60		78,000			40		hot H_2O; stratify 90 days		
CEANOTHUS PROSTRATUS (Squawcarpet)	60		42,000	July		71		hot H_2O; stratify 90 days		
CEANOTHUS RIGIDUS (Rigid ceanothus)	60		72,000	May-June		77		hot H_2O		
CEANOTHUS SANGUINEUS (Redstem ceanothus)	77		128,000	late summer						
CEANOTHUS SOREDIATUS (Jim brush)	60		122,000	May-July		100		boil 5 min. then stratify 90 days		
CEANOTHUS SPINOSUS (Red heart)	21 60		47,700 60,000	May-June		96		hot H_2O; stratify 90 days		
CEANOTHUS THYRSIFLORUS (California lilac)	21 60		181,400 48,000	Apr.-July		46		hot H_2O		
CEANOTHUS VELUTINUS (Snowbrush)	60 77		71,000 542,076	July-Aug. late summer		68		hot H_2O; stratify 90 days		
CEANOTHUS VERRUCOSUS (Barranca bush)	60		72,000	Apr.-June		72		stratify 90 days or hot H_2O		
CEDRELA FEBRIFUGA	54		57,600	Apr.		61				
CEDRELA MICROCARPA	54		168,000	Feb.-Mar.		80				

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt Test %	Germ Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
CEDRELA SERRATA	54		72,800	July-Dec.						
CEDRELA SINENSIS (Chinese cedrela)	12	33	15,000				dry			
CEDRELA TOONA	54		128,160	Jan.-Aug.		51				70,900
CEDRUS ATLANTICA (Atlas cedar)	8		5,909							
	51		7,100		15	15				
CEDRUS DEODARA (Deodar cedar)	8		3,454							
	51		3,815		89	48				
	52		4,560							
	54		4,480	Oct.-Nov.		72				2,150
CEDRUS LIBANI (Cedar of Lebanon)	8		4,548							
CELASTRUS (Bittersweet)	47							stratify	fall or spring	
	50							stratify	fall or stratify	
CELASTRUS SCANDENS (American bittersweet)	15		12,250	fall	88	80		stratify	fall	
	19	16	25,402							
	20		28,407							
	36	19								
	72	18	30,960	fall	96		dry		fall or spring	4,800
CELTIS (Hackberry)	16		2,081		82					
	32						clean	none	soon as ripe	
	47							none	soon as ripe	
	50								soon as ripe	

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Expected
CELTIS DOUGLASI	77		3,512	fall	95		dry	stratify Nov.-Apr.	spring	600
CELTIS GEORGIANA	73	80	4,500	fall	80		dry or moist peat	depulp	fall or spring	
CELTIS LAEVIGATA (See C. mississippiensis)										
CELTIS MISSISSIPPIENSIS (Southern hackberry)	4			Aug.-Feb.						
	20							stratify 90-150 days	fall	
	37	66	3,880							
	58	57								
	59				88	37				
	73	70	5,600	fall	95	80	dry or stratify	depulp; H_2SO_4	fall or spring	77
	74	75	4,242	fall	88	36	dry	stratify Jan.-Apr.	fall or stratify	
CELTIS OCCIDENTALIS (Hackberry)	1		2,840			86				
	2		2,029	fall or winter			dry or stratify	H_2SO_4 2 hrs.		40
	3			fall or winter			dry or stratify	H_2SO_4 4 hrs.	fall or spring	
	4	40	4,500	fall or winter	96			stratify		
	9		1,574		93					
	11		1,829 (with flesh)		96					
	19	10								
	20							stratify 70-160 days	fall or spring	
	22		3,725							
	23					75				
	35							H_2SO_4 2 hrs.		
	37	74	1,856							
	58				99					
	59				89	50				116

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
CELTIS OCCIDENTALIS (Continued)	72	40	5,410	fall	92			stratify 60 days	spring	
	74	72	2,107	fall and winter	95	67	dry	stratify	fall or stratify	283
	76	51	1,900	fall	87		dry	stratify at 41°F.	fall or spring	266
CELTIS PALLIDA (Sperry hackberry)	17					48		none	early spring	
	75		18,205	Nov.			dry	none	May	
CELTIS RETICULATA (Thick-leaved hackberry)	17					70			early spring	
	75	80	5,255	late fall			dry	none or stratify	fall or spring	415
	77		4,000			98	dry	stratify Nov.-Apr.	spring	
CELTIS TETRANDA	54		72,000	Aug.-Sept.		39				
CEPHALANTHUS (Buttonbush)	26			fall or winter			moist or dry		fall or spring	
	47							stratify	fall or spring	
CEPHALOTAXUS (Plum-yew)	26			early fall				stratify	second fall	
	47							stratify	spring	
CERATONIA SILIQUA (Carob)	8		2,538							
	14					37				
	50							H_2O 3 days		
	73		2,650	fall	80		dry	H_2O	spring	20
CERCIDIPHYLLUM	47							stratify	spring	
CERCIDIPHYLLUM JAPONICUM (Katsura-tree)	8		668,181							
	46						dry	stratify 90-120 days at 32-50°F.		

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt Test %	Germ Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
CERCIS (Redbud)	47							H_2O	spring	
CERCIS CANADENSIS (Redbud)	3	21	14,400	fall			dry	H_2SO_4 15 min.		
	4			July-Nov.	80		dry			
	12	33	25,000	fall			dry	scarify		
	16					3				
	37	20	17,872							
	58	10								
	59				70	23				281
	72	34		late summer						3,200
	73	30		fall	50		dry	scarify	spring	730
	74	33	18,011	summer and fall	96	32	dry	scarify	spring	281
CERCIS CHINENSIS (Chinese redbud)	12	40	20,000	fall	90		dry	scarify		
	72	40		fall			dry		spring	0,500
CERCIS OCCIDENTALIS (California redbud)	60		12,000	Sept.-Feb.		60		hot H_2O; stratify 90 days		
CERCIS RENIFORMIS	64			summer			dry			
CERCOCARPUS BUTULOIDES (Birchleaf mountain mahogany)	60		30,000	June-July		89		none		
CERCOCARPUS LEDIFOLIUS (Mountain mahogany)	13					0				
	17					0				
	60		42,000	May-June		44		none		
CERCOCARPUS MONTANUS (See C. parvifolius)										

Name	Ref. No.	Lb.Seed 100 lb. Fruit	No.Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb.Seed
CERCOCARPUS PARVIFOLIUS	9		42,000		82					
(Valley mahogany)	13					3				
	14					62				
	17					45				
	77		41,600	summer	78					
CERCOCARPUS SP.	76	22					dry			
CERIOPS CANDOLLEANA	54		144(fruit)							
CHAENACTIS ARTEMISIAEFOLIA	60		980,000	June		32		none		
CHAENACTIS GLABRIUSCULA	60		1,206,000	May-June		56		none		
CHAMAECRISTA FASCICULATA	26			summer			dry	H_2O	spring	
(Partridge pea)	72		42,300	fall			dry	scarify	spring	
CHAMAECRISTA NICTITANS	73		94,000	fall			dry	scarify	spring	
CHAMAECYPARIS ALUMNI	77	14	230,400	Sept.	3		dry		spring	
CHAMAECYPARIS LAWSONIANA	1		129,414			40				
(Port Oxford cedar)	8		245,661							
	22	(1935)	204,800							
	22		108,700							
	26			fall			dry	none	spring	
	51		200,000		55	40				
	54		275,200			18				
	65		200,000			40				
	77	19	156,000		39		dry		spring	
CHAMAECYPARIS NOOTKATENSIS										
(Alaska cedar)	8		118,[illegible]							
	54		118,4[illegible]							

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ Test %	Type of Storage	Type of Treatment	Time to Plant	Usabl. Plant Lb. Se. d
CHAMAECYPARIS OBTUSA	1		243,326			9				
(Hinoki cypress)	8		187,727							
	51		204,250		23	22				
	54		244,800							
CHAMAECYPARIS PISIFERA	8		500,000							
(Seward retinospora)	51		590,000		9	7				
CHAMAECYPARIS THYOIDES	1	10	460,000			88				
(Southern white cedar)	12								spring	
CHENOPODIUM ALBUM	71		648,571							
CHENOPODIUM AMBROIOIDES	54		4,280,000							
	60		4,480,000	Sept.-Nov.		34		none		
CHENOPODIUM BERLANDIERI	71		744,262							
CHENOPODIUM GIGANTOSPERMUM	71		454,000							
CHENOPODIUM HYBRIDUM (See C. gigantospermum)										
CHENOPODIUM LEPTOPHYLLUM	71		1,194,736							
CHENOPODIUM OBLONGIFOLIUM	17					0				
CHENOPODIUM QUINOA (Quinoa)	75						dry	none	early spring	
CHENOPODIUM RUBRUM	71		7,566,666							
CHENOPODIUM STANDLEYANUM	71		648,571							
CHICKRASSIA TABULARIS	54		44,960	Jan. Mar.		35				
CHILOPSIS LINEARIS	3		92,000	fall-winter			50° dry		spring	
(Desertwillow)	4			fall-winter						

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
CHILOPSIS LINEARIS (Continued)	13					100				
	16		42,325		94	79				
	17					68				
	37		116,177							
	75	49	40,224	fall	75	38	dry	none	spring	2,400
CHIONANTHUS (Fringetree)	47							stratify	spring	
	50							stratify	fall or stratify	
CHIONANTHUS VIRGINICA (Fringetree)	12	33	2,000	Aug.	97			stratify	Nov.	
	26							stratify	fall or spring	
	53	34	1,100	fall	99					
CHLOROXYLON SWIETENIA	54		28,160	Mar.-Aug.		37				19,575
CHRYSANTHEMUM LEUCANTHEMUM	71		2,063,630							
CHRYSOPSIS VILLOSA	60		403,000	July-Sept.		14		none		
CICUTA MACULATA	71		313,103 (Mericarps)							
CINNAMOMUM CAMPHORA (Camphor tree)	54		2,720	Sept.-Dec.						2,300
CINNAMOMUM CECIDODAPHNE	54		1,115	Aug.-Nov.		21				
CIRSIUM ARVENSE	71		288,253							
CIRSIUM MEGACEPHALUM	71		53,727							
CISSUS AMPELOPSIS (Heartleaf ameplopsis)	12	20	9,600	Oct.	90			stratify		
	26			fall				stratify or dry	fall or spring	

Name	Ref. No.	Lb.Seed 100 lb. Fruit	No.Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb.Seed
CISTUS (Rockrose)	47							none	spring	
CITRULLUS VULGARIS (Watermelon)	17					66	dry	none	Apr.-May	
CITRUS	47							stratify or soak dry seed	soon as ripe	
CLADRASTIS (Yellow-wood)	50						dry	none	spring	
CLADRASTIS LUTEA (Yellow-wood)								stratify	fall or spring	
CLARKIA ELEGANS	60		2,225,000	May-June		14		none		
CLEISTANTHUS COLLINUS	54		4,000	Mar-Apr.						2,250
CLEMATIS (Clematis)	26			fall			must not dry	stratify at once	fall or stratify	
	47							none	spring	
	50							stratify soon as ripe	spring	
CLEMATIS DRUMMONDI (Drummond clematis)	17					78				
CLEMATIS FLAMMULA (Plume clematis)	8		24,545							
CLEMATIS LASIANTHA (Pipe-stem clematis)	21		103,000							
	60		184,000	June-Sept.		58		none		

Name	Ref. No.	Lb.Seed 100 lb. Fruit	No.Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb.Seed
CLEMATIS LIGUSTICIFOLIA-	13					11				
(Western virgins-	17					84				
bower)	60		93,000	June-Sept.		21		none		
	77		329,150	fall		45	dry	deawn	spring	
CLEMATIS PAUCIFLORA (Rope vine)	60		85,000	May-July		36		none		
CLEMATIS VITICELLA (Italian clematis)	8		327,000							
CLEOME SERRULATA (Rocky Mountain bee-plant)	71		73,821							
CLERODENDRON	47							none	soon as ripe	
CLERODENDRON INFORTUNATUM	54		8,800	May-June		19				
CLERODENDRON SQUAMATUM	54		8,160							
CLETHRA (Clethra)	47							none	winter or spring under glass	
CLETHRA ALNIFOLIA (Summersweet)	26			fall				stratify	fall or stratify	
COCCULUS CAROLINUS (Carolina moonseed)	73						dry		winter	2,000
COCHLOSPERMUM GOSSYPIUM	54		4,320			8				
COLEBROOKEA OPPOSITIFOLIA	54		8,800	May						

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
COLESANTHUS SQUAMULOSUS	(See Brickellia squamulosa)									
COLLOMIA LINEARIS	71		605,333							
COLUTEA (Bladder-senna)	47							H_2O	fall or spring	
COLUTEA ARBORESCENS (Bladder-senna)	3		25,000	fall			dry	H_2SO_4 15 min.		
	8		270,454							
	17					10				
	72		55,280	fall						5,080
COMAROSTAPHYLOS DIVERSIFOLIA (Comarostaphylos)	21		16,300							
CONRINGIA ORIENTALIS	71		211,162							
CONVOLVULUS REPENS	71		14,934							
CORDIA FRAGRANTISSIMA	54		800							
CORDIA MYXA	54		2,480	July-Aug.						
CORDIA VESTITA	54		1,280							640
COREOPSIS BIGELOVI	60		310,400			5		none		
COREOPSIS DOUGLASI	60		704,500	June		39		none		
COREOPSIS TINCTORIA	71		5,044,444							
CORISPERMUM EMARGINATUM	71		238,947							
CORISPERMUM NITIDUM	71		349,230							
CORISPERMUM VILLOSUM	71		342,641							

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
CORNUS (Dogwood)	16		12,937		89					
	26			soon as ripe			Must not dry	stratify	soon as ripe	
	36			soon as ripe			tight, dry if not planted immediately	none or stratify 85 days at 40° F.	immediately or stratify	
CORNUS ALTERNIFOLIA (Pagoda dogwood)	53		5,856							
	72		7,900	fall	86					
CORNUS AMOMUM (Silky dogwood)	15		3,744		60					
	19	17								
	26			summer			moist or dry	stratify	fall or stratify	
	53		10,886		96					
	72	18	11,570	fall	74		sand and peat	stratify 120 days at 41°F.	spring	3,816
CORNUS ASPERIFOLIA (Roughleaf dogwood)	3	18	18,700	summer				stratify 130 days at 41°F.	fall or spring	
	37		8,546							
	59			Sept.		60		stratify 60 days		
	74	27	15,576	summer-fall	85		dry	stratify Dec.-Mar.	Mar.	
CORNUS CANADENSIS (Bunchberry)	72			fall						
CORNUS CIRCINATA (Round-leaved cornel)	72		22,200	late summer	99					
CORNUS FLORIDA (Flowering dogwood)	1		4,180							
	2			July-Dec.						
	3	46	4,800					stratify 120 days at 41°F.	fall or spring	
	12	40	4,000	Oct.	90			stratify at 40°F.	Nov.	

Name	Ref. No.	Lb.Seed 100 lb. Fruit	No.Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb.Seed
CORNUS FLORIDA (Continued)	15	33		Oct.		70		stratify		
	37		3,647							
	46						clean,dry	stratify 100-130 days at 32-50°F.		
	48					85	clean,dry	stratify 120 days at 33-45°F.		
	58	22			94	18				
	72	40	3,500	fall			acid peat	stratify 120 days at 41°F.		780
	73	40	5,088	fall	74			stratify - depulp	winter-spring	
CORNUS KOUSA (Kousa dogwood)	46						clean,dry	stratify 120 days at 32-50°F.		
CORNUS MAS (Cornelian cherry)	7				90					
	12		2,000	Aug.	94			stratify at 40°F.		
	46						clean,dry	stratify 120 days at 41-50°F.		
	72		2,020	fall	99		dry	germ. 2nd yr.	spring	1,300
CORNUS NUTTALLI (Western dogwood)	46						clean,dry	stratify 140 days at 30-50°F.		
	48						clean,dry	stratify 120-150 days at 38°F.		
	60		3,000	Sept.-Oct.		100		treat stored seed with sulphuric acid 4 hrs. & stratify 90 days		
CORNUS OBLIQUA (Pale dogwood)	74	8								
CORNUS OCCIDENTALIS (Western osier)	77	15	15,750		94	38	dry	stratify		
CORNUS OFFICINALIS (Japanese cornelian-cherry)	46						dry-clean	stratify 300 days at 41-50°F.		

Name	Ref. No.	Lb.Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb.Seed
CORNUS PANICULATA	2			June-Sept.						
(Gray dogwood)	15	25	15,270	Sept.				stratify		
	19									
	20		10,160					stratify 120 days or more	fall or stratify	
	53		10,410		75					
	72	18	12,800	late fall	96					
CORNUS RACEMOSA (See C. paniculata)										
CORNUS STOLONIFERA	13					6				
(Red osier)	18		17,300		80					
	19	16								
	20							stratify 160 days or more	fall or stratify	
	46					75	clean, dry	stratify 290 days at 41-50°F.		
	72	15	13,800	fall	92			stratify 113 days	spring	
	77	15	21, 824	late summer			dry	stratify 155 days at 40°F.	spring	2,979
CORONILLA EMERUS (Scorpion-senna)	53	16	93,050	July	97					
CORYLOPSIS (Winterhazel)	47							stratify	spring	
	50						dry		spring under glass	
CORYLOPSIS VEITCHIANA (Veitch winterhazel)	53	19	32,300	Sept.	98					
CORYLUS (Hazelnut; filbert)	47							stratify	fall or spring	
	50						moist	stratify	soon as ripe or stratify	

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
CORYLUS AMERICANA (Hazelnut)	2		300	summer				stratify		
	19	28	640							
	20		520					stratify 120 days or more	fall or stratify	
	53	29	416	fall	92			mulch	soon as ripe	55
CORYLUS AVELLANA (Filbert)	8		454							
	19		176	fall	93					
CORYLUS CALIFORNICA (California hazelnut)	60		400	Sept-Oct		20		stratify 90 days in peat moss		
CORYLUS COLURNA (Tree hazelnut)	54		560	Oct.						
	72			fall						
CORYLUS MAXIMA (Giant filbert)	7				85					
CORYLUS ROSTRATA	72		425	fall	80					
COTINUS COGGYGRIA (Smoke-tree)	26			summer			moist	stratify		
	53		47,700							
	72		33,800	July	70					
COTONEASTER (Cotoneaster)	18		19,450		95					
	46						clean, dry	stratify 60-75°F. for 90-130 days, then at 34-41°F. for 90-120 days or 90-150 min. H_2SO_4 in place of 60-75°F. treatment	fall, germination second spring	
	50							stratify	fall or stratify	

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per pound	Time to Collect	Cutt Test %	Germ Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
COTONEASTER DIELSINA (Diel's cotoneaster)	72			late fall			acid peat	H_2SO_4 40 min.; stratify 110 days	spring	6,000
COTONEASTER DIVARICATA (Spreading cotoneaster)	58				62					
	72			fall	80					
COTONEASTER FOVEOLATA	58				66					
COTONEASTER FRANCHETI (Franchet cotoneaster)	43				61	11		43°F. 30 days		
COTONEASTER LUCIDA	18		18,710							
COVILLEA TRIDENTATA (Creosotebush)	13					67				
CONANIA STANSBURIANA (Quinine bush)	13					21				
CRATAEGUS	2			summer-fall				stratify 1 yr.; or 90 days at 41°F., then scarify	fall or spring	
	3	20	12,000					scarify; stratify 1 yr.		
	9		13,185			63				
	11		8,535			60				
	12	33	6,000	Aug.-Oct.		40		stratify 1 yr.		
	15		19,700							
	16		8,056			63				
	19	2								
	36							stratify 1 yr.	second fall or second spring	
	37	8								
	38							remove carpels and testa at 41°F. for 30 days		

Name	Ref. No.	Lb.Seed 100 lb. Fruit	No.Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ Test %	Type of Storage	Type of Treatment	Time to Plant	Usable plants Lb.Seed
CRATAEGUS (Continued) (Hawthorn)	46						moist	clean and remove carpels; stratify up to 1 yr. at 41-50°F.		
	58				58					
	70							stratify at low temperature. Some species also require pre-treatment at high temperature.		
CRATAEGUS ARNOLDIANA	70							stratify 60 days at 75°F.; then at 41°F.		
CRATAEGUS BREVISPINA	(See C. douglasi)									
CRATAEGUS CARRIEREI	70							stratify 60 days at 75°F.; then at 41°F.		
CRATAEGUS COCCINEA (Thicket hawthorn)	53	8	10,384	late fall						
	70							stratify 120 days at 41°F.		
CRATAEGUS COLUMBIANA	77	5	37,300	late summer			dry	stratify Nov.-Apr.	spring	
CRATAEGUS CORBATA	70							stratify 120 days at 41°F.		
	72		29,760	late fall	70					
CRATAEGUS CRUS-GALLI (Cockspur thorn)	2							scarify and stratify 90 days at 41°F.	spring (germinates first year)	
	70							stratify 120 days at 70°F. (or less if pre-treated with H_2SO_4), then stratify at 41°F.	summer unless specially treated	

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
CRATAEGUS DOUGLASI	22		23,000							
(Western thorn apple)	77	14	21,535	summer				stratify Nov.-Apr.	spring	200
CRATAEGUS FLAVA	70							stratify 120 days at 70°F. or less time if pre-treated H_2SO_4; then stratify at 41°F.		
CRATAEGUS MACRACANTHA (Spike hawthorn)	15		20,600	fall				stratify		342
CRATAEGUS MOLLIS	70							stratify 60 days at 75°F. then at 41°F.		
CRATAEGUS MONOGYNA (English hawthorn)	7				91					
	15		6,[illegible]	fall				stratify		
	53		5,6[illegible]0		90					
	72		6,[illegible]00	fall	95					
CRATAEGUS MONOGYNA STRICTA	72		6,700	fall	98		acid peat	stratify alternating temperature 2 yrs.	spring	320
CRATAEGUS OXYACANTHA (English hawthorn)	7				35					
	54		1,440			10				
	70							stratify at 41°F. preceded by either 90 days stratification at 77°F. or 3 hrs. H_2SO_4 plus 21 days at 77 F.		
CRATAEGUS PEDICELLATA	72		4,670	late fall	53					
CRATAEGUS PHAENOPYRUM	(See C. cordata)									

Name	Ref. No.	Lb.Seed 100 lb. Fruit	No.Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb.Seed
CRATAEGUS PUNCTATA	70							stratify 120 days at 70°F. (or less if pre-treated with H_2SO_4), then stratify at 41°F.	summer unless specially treated	
CRATAEGUS RIVULARIS (River hawthorn)	17					0				
CRATAEGUS ROTUNDIFOLIA	70							stratify 120 days at 70°F. (or less if pre-treated with H_2SO_4), then stratify at 41°F.	summer unless specially treated	
CRATAEGUS SALIGNA	13					7				
CRATAEGUS SANGUINEA	7 70				35			stratify 60 days at 75°F., then at 41°F.		
CRATAEGUS SPATHULATA	73	12	5,500				moist peat	stratify	fall or spring	
CRATAEGUS TOMENTOSA	70							stratify 60 days at 75°F., then at 41°F.		
CRATAEVA RELIGIOSA	54		10,240	July-Sept.		7				
CROSSOSOMA CALIFORNICUM	60			May-July		24		none		
CROTALARIA INTERMEDIA	60 62		87,000 96,000			54		stratify 90 days		
CROTALARIA JUNCEA	54		10,880	Dec.-Apr.		25				
CROTALARIA MOLLIS	54		8,320							

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
CROTALARIA SERICEA	54		18,400	Jan.-Feb.						
CROTALARIA SPECTABILIS	58					31				
	62		30,000							
	64					39				
CROTALARIA STRIATA	62		75,000							
CRYPTANTHA INTERMEDIA	60		995,000	Aug.		63		none		
CRYPTOCARYA AMYGDALINA	54		15,520 (fruits)							
CRYPTOMERIA JAPONICA (Common cryptomeria)	8		118,181							
	26			early fall				none	spring	
	[illegible]							none	soon as ripe	
	51		122,470			13				
	54		136,560	July-Dec.		80				5,900
CUCURBITA FOETIDISSIMA	60		23,000	June		4		none		
CULLENIA EXCELSA	54		76							
CUPANIA LESSERTIANA	54		784	Aug.-Nov.		31				150
CUPRESSUS ARIZONICA (Arizona cypress)	1		100,000							
	17			fall		12	dry	none	early spring	
	26			fall			dry	none	spring	
CUPRESSUS FUNEBRIS	54		222,400	Feb.-June		18				
CUPRESSUS GOVENIANA (Gowen cypress)	51		126,000		32					

CUPRESSUS LAWSONIANA (See Chamaecyparis lawsoniana)

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
CUPRESSUS LUSITANICA (Portuguese cypress)	54		95,200							
CUPRESSUS MACNABIANA (Macnab cypress)	51		79,500			3				
CUPRESSUS MACROCARPA (Monterey cypress)	1		94,968			16				
	46						dry	60 days at 32-50°F.		
	51		59,250		23	33				
	52		60,960							
	65		60,000			16				
CUPRESSUS SEMPERVIRENS (Italian cypress)	8		92,863							
	43					40		none		
	54		92,400	Feb.-Mar.						
CUPRESSUS TORULOSA (Bhutan cypress)	54		92,800	Apr.-Nov.						
CUSCUTA ARVENSIS	71		585,806							
CUSCUTA CEPHALANTHI	71		363,200							
CUSCUTA CORYLI	71		201,777							
CYCLOLOMA ATRIPLICIFOLIUM (Winged pigweed)	71		288,909							
CYDONIA (Quince)	47							stratify	fall or spring	
	50							stratify	spring	
CYDONIA VULGARIS (Common quince)	7				85					
CYPERUS DIANDRUS	71		3,783,333							
CYPERUS ESCULENTUS	71		4,540,000							

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
CYPERUS SCHWEINITZII	71		324,285							
CYTISUS (Broom)	47							H_2O	spring	
	50						dry	none	spring	
CYTISUS DECUMBENS	78					80	dry	H_2SO_4	fall	
CYTISUS SCOPARIUS (Scotch broom)	12	16	65,000	June-July	95		dry	scarify		16,000
	22 (1935)		44,000							
	22		32,000							
	51		55,360							
	53		59,900							
	58				61					
	60		68,000	July-Sept.		44		scarify or hot H_2O		
	72	17	61,300	summer	73					
	73	17	57,500	spring	80		dry	scarify	second spring	360
	77	22	40,578	summer	96	45	dry		spring	3,850

Name	Ref. No.	Lb.Seed 100 lb. Fruit	No.Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb.Seed
DALBERGIA CULTRATA	54		5,600	Dec.-Feb.						
DALBERGIA LATIFOLIA	54		12,320	Jan.-May		61				8,400
DALBERGIA OLIVERI	54			Feb.-Mar.						100
DALBERGIA PANICULATA	54		2,880	Jan.-Mar.						
DALBERGIA SISSOO (Sissoo)	54		24,000	Nov.-Mar.		93				3,100
DAPHNE (Daphne)	47							stratify	fall or spring	
	50							stratify	soon as ripe	
DAPHNE MEZEREUM (February daphne)	53		10,900							
	72	11	12,300	early fall	99		dry	mulch	fall	1,000
DAUCUS CAROTA (Carrot)	62		405,000							
	63		408,160							
DAVIDIA INVOLUCRATA (Dovetree)	26							file coat and soak	fall or spring	
DEHAASIA CUNEATA	54		160	Jan.-Feb.		90				
DENDROCALAMUS (Giant bamboo)	54		5,920							
DENDROCALAMUS LONGISPATHUS	54		68,800	Mar.						
DENDROCALAMUS MEMBRANACEUS	54		16,000							
DENDROCALAMUS STRICTUS (Male bamboo)	54		16,960	Mar.-June		50				4,950

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
DENDROMECON RIGIDA (Bush poppy)	60		68,000	July-Sept.		44		scarify or hot H_2O		
DERRIS ROBUSTA	54		48,000	Mar.						
DESMANTHUS ILLINOIENSIS	14					84		H_2SO_4 1 hr.		
DESMANTHUS VIRGATUS	54		128,000			5				
DESMODIUM (Tickclover)	26			summer and fall				stratify	spring	
	47							stratify	spring	
DESMODIUM GANGETICUM	54		572,800	Nov.		22				
DESMODIUM TORTUOSUM (Beggarweed)	62		194,000							
DESMODIUM TRIFOLIUM	54		630,400	Nov.						
DEUTZIA (Deutzia)	47							none	spring (under glass)	
DICENTRA CHRYSANTHA (Golden eardrops)	60		400,000	May-July		0				
DICHROSTACHYS CINEREA	54		28,800							1,750
DIERVILLA (Bush-honeysuckle)	47							none	spring (under glass)	
	50						dry	none		
DIGITALIS PURPUREA (Foxglove)	60		4,000,000	Aug.		66		none		
DILLENIA INDICA (Indian dillenia)	54		24,000	Feb.						

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
DILLENIA PENTAGYNA	54		21,920	May						
DIOSPYROS ASSIMILIS	54		120	Sept.		33				
DIOSPYROS CHLOROXYLON	54		2,880	Jan.-Apr.						
DIOSPYROS EBENUM	54		4,160	Sept.-Oct.		81				
DIOSPYROS EMBRYOPTERIS	54		352	May-Aug.		12				
DIOSPYROS MELANOXYLON	54		480	Apr.-June						290
DIOSPYROS MONTANA (Mountain persimmon)	54		592	Jan.						
DIOSPYROS TOMENTOSA	54		528	Apr.-June		89				
DIOSPYROS VIRGINIANA (Persimmon)	12			Oct.				stratify		
	15	33	1,000			80		strarify		250
	19	10								
	20							stratify 40-120 days	fall or strat-ify	
	32						clean, moist	stratify	fall or winter	
	37	16	1,764							
	58					90				
	73	30	665	fall	99		moist	stratify	spring	
	74	16								
DIPLACUS AURANTIACUS (Bush monkey-flower)	60		16,000,000	July-Sept.		56		none		
DIPLACUS LONGIFLORUS	60		9,343,000	May-July		46		none		
DIPLACUS PARVIFLORUS	60		9,500,000	June-Aug.		82		none		
DIPLACUS PUNICEUS (Red bush monkey-flower)	60		13,000,000	May-June		35		none		

Name	Ref No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt Test %	Germ Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
DIPTEROCARPUS ALATUS	54		58 (fruit)	Apr-May		27				
DIPTEROCARPUS COSTATUS	54		190 (fruit)	Mar-May		35				
DIPTEROCARPUS GRIFFITHI	54		20 (fruit)							
DIPTEROCARPUS INDICUS (See D. turbinatus)										
DIPTEROCARPUS MACROCARPUS (See D. pilosus)										
DIPTEROCARPUS PILOSUS	54		56	Jan-Feb - May		50				
DIPTEROCARPUS TUBERCULATUS	54		70 (fruit)	May		83				
DIPTEROCARPUS TURBINATUS	54		74	May-June		62				25
DODONAEA ARIZONICA (Hopbush)	17					44	dry	none	spring	
DODONAEA VISCOSA	17					2				
	54		51,200	Apr-May		36				
	75		20,377	June			dry	none	April	
DOLICHANDRONE (Macfadeyna)	54		9,440			38				
DOLICHANDRONE FALCATA	54		6,400			27				
DRABA AIZOIDES	78					90	dry		fall	
DRACOCEPHALUM PARVIFLORUM	71		172,952 (Nutlets)							
DRYMOCALLIS ARGUTA	71		2,837,500							
DUABANGA SONNERATIOIDES	54		11,376,000	Apr-May		28				30,575

Name	Ref. No	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt Test %	Germ Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
DURANTA PLUMIERI (Golden dewdrop)	54		6,400	July-Sept.						130
DYSOXYLUM BEDDOMEI	54					76				
DYSOXYLUM NECTARIFERUM	54		68							
DYSOXYLUM MALABARICUM	54		55	July-Aug.		85				47

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
ECHININOCARPUS ASSAMICUS	54		3,520							
EHRETIA ACUMINATA (Heliotrope tree)	54			June-Dec.						8,750
EHRETIA LAEVIS	54		66,000	Jan.-Apr.		18				
ELAEAGNUS (Elaeagnus)	47							stratify	fall or spring	
	50							stratify 1 year	plant second spring	
ELAEAGNUS ANGUSTIFOLIA (Russian olive)	2		3,225	Sept.			dry	90 days at 41°F.	fall or spring	
	3		2,500 (with pulp)	fall				stratify; depulp	fall or spring	
	7				85					
	9		2,705		99					
	11		2,912		91					
	12		2,000		99			stratify		
	16		4,282		95					
	17					24			fall or spring	
	18		1,936							
	22		3,100 (with pulp)							
	35					7		depulp; stratify		
	37	14	1,846							
	53	84	2,300		87			stratify over winter	spring	500
	59				74					178
	74	23	4,245	fall	95	63	dry	stratify, Dec.-Mar.	Mar.	227
	75	80 (dry fruit)		fall	93		dry	none or stratify	fall or winter	840
	76	62	3,000	fall	88	79	dry	stratify at 41°F.	fall or spring	289
	77	33	2,940	fall	95		dry	stratify 110 days at 40°F.	spring	250

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pounds	Time to Collect	Cutt Test %	Germ Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
ELAEAGNUS ARGENTEA (Silverberry)	18		2,004 (with pulp)							
			3,635	clean						
	72		3,800	Sept.	90					
ELAEAGNUS MULTIFLORA (Gumi)	53	2	16,600	July	99		sand and peat	stratify over winter	spring	1,000
ELAEAGNUS PUNGENS (Thorny elaeagnus)	12	20	3,750	spring	99			stratify	spring or fall	
	15	20						stratify		
ELAEAGNUS UMBELLATA (Autumn elaeagnus)	12		16,800		95					
	15		16,800	Oct.	95			stratify		
	73	10		early summer				depulp		
ELAEODENDRON GLAUCUM	54		1,760	Feb.-June						180
ELEOCHARIS CALVA (Spike rush)	6			Aug.		6		210 days H_2O at 35 F.		
ELEOCHARIS PALUSTRIS	71		908,000							
EMMENANTHE PENDULIFLORA (Whispering belle)	60		1,400,000	June-July		14		none		
ENCELIA ACTONI (Acton encelia)	60		348,000	May-June		32		none		
ENCELIA CALIFORNICA (California encelia)	60		327,000	May-June		28		none		
ENCELIA FARINOSA (White brittlebush)	60		570,000	May-July		20		none		
ENCHYLAENA TOMENTOSA	75			fall and winter			dry	none	Apr.	

Name	Ref. No.	Lb.Seed 100 lb. Fruit	No.Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb.Seed
ENGELHARDTIA COLEBROOKIANA	54		14,720	May-June		14				
ENGELHARDTIA SPICATA	54		14,400							
ENKIANTHUS (Enkianthus)	47						dry	none	winter or spring (under glass)	
	50						dry	none	spring	
ENTEROLOBIUM SAMAN (See Pithecollobium saman)										
EPHEDRA DISTACHYA	75			Aug.			dry	none	Mar.	
EPHEDRA GERARDIANA (See E. distachya)										
EPHEDRA NEVADENSIS (Nevada jointfir)	17					0				
EPHEDRA SINICA (Chinese jointfir)	17					52	dry	none	spring and summer	
	75		60,242	June	90	52	dry	none	spring	24,000
EPHEDRA TRIFURCA (Three pronged jointfir)	17					34				
EPIGAEA REPENS (Trailing arbutus)	47						dry	none	winter or spring (under glass)	
	50			soon as ripe			clean		soon as ripe (under glass)	
EPILOBIUM CALIFORNICUM	60		1,633,000	May-Aug.		95		none		

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt Test %	Germ Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
ERIOBOTRYA JAPONICA (Loquat)	50							stratify		
ERIOBOTRYA PETIOLATA	4		180	Nov.-Dec		50				
ERIODENDRON ANFRACTUOSUM	54		7,200	Mar.-Apr.						6,400
ERIOGONUM FASCICULATUM (California buckwheat-brush)	17 21 60		 238,700 493,000	 June-Aug.		20 46		 none		
ERIOGONUM GIGANTEUM	60		899,000	June-July		47		none		
ERIOGONUM LATIFOLIUM	60		504,000	July-Sept		24		none		
ERIOGONUM FOLIFOLIUM (See E. fasciculatum)										
ERIOGONUM UMBELATUM	13				25					
ERIOGONUM WRIGHTI (Wright's buckwheat-brush)	17			Sept.		50	dry	none	summer	
ERIOPHYLLUM CONFERTIFLORUM (Golden yarrow)	60		2,600,000	May-Sept.		21		none		
ERODIUM CICUTARIUM (Alfileria)	17 64			 spring		58 	 dry		 early fall	
ERODIUM TEXANUM	64			late spring		16	dry		early fall	
ERUCASTRUM POLLICHII	71		1,107,317							
ERYSIMUM ASPERUM (Western wall flower)	60 71		373,000 1,008,888	June-Aug.		84		none		
ERYSIMUM CHEIRANTHOIDES	71		3,632,000							

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt Test %	Germ Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
ERYSIMUM PARVIFLORUM	71		2,522,222							
ERYTHRINA SUBEROSA	54		2,880			82				1,800
ERYTHROXYLUM MONOGYNUM	54		16,000	Jan.-Feb.		2				320
ESCHSCHOLTZIA CALIFORNICA (California poppy)	60		540,000	Apr.-July		49		none none		
ESCHSCHOLTZIA CALIFORNICA ALBA	17					46				
EUCALYPTUS (Gum-tree)	47 50			soon as ripe			dry	none none none none	summer spring	
EUCALYPTUS CINEREA	54		3,968,000			1				
EUCALYPTUS CITRIODORA (Lemon-scented gum)	54		70,400			70				
EUCALYPTUS GLOBULUS (Blue gum)	54		160,000	Mar.-May		80				25,000
EUCALYPTUS NAUDINIANA	54					480 per oz.				
EUGENIA CYMOSA	54		4,800	Apr.-May		15				
EUGENIA GARDNERI	54		2,040			4				
EUGENIA GRANDIS	54		83	May-June		90				71
EUGENIA GRATA	54		2,400	Apr.-May		3				
EUGENIA JAMBOLANA (Jambolan plum)	54		544	May-Aug.		55				290
EUGENIA OPERCULATA	54		320	June-July		84				770

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt Test %	Germ Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
EUGENIA UTILIS	54		1,760							
EUPATORIUM PERFOLIATUM	71		2,670,580							
EUPHORBIA HUMISTRATA	71		1,891,666							
EUPHORBIA ESULA	71		129,714							
EUPHORBIA NUTANS	71		810,714							
EUPHORBIA SERPYLLIFOLIA	71		1,513,333							
EUROTIA LANATA (Winter-fat)	13					81				
	14					86		clean		
	17					72				
	77		54,400	late summer					immediately	
EURYOPS MULTIFIDUS	75			spring			dry	none	spring	
EVODIA FRAXINIFOLIA	54		43,200							
EVODIA MELIAEFOLIA	54		35,200	Nov.		29				
EVONYMUS (Evonymus)	47							stratify	spring	
	50							Stratify	spring	
EVONYMUS ALATA (Winged evonymus)	46						clean, dry	stratify 90-100 days at 32-50°F.		
	72		18,600	fall	99					
EVONYMUS AMERCANUS (Strawberry bush)	12	16	30,000	Sept.	98			stratify		
	72	17	30,000	fall	98					
EVONYMUS ATROPURPUREUS (Burning bush)	15	10	40,000 (2,025 berries)	Oct.	94	70		stratify		8,000
	36	22								

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt Test %	Germ Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
EVONYMUS BUNGEANA (Winterberry Evonymus)	15		13,540	Oct.				stratify	fall	1,500
EVONYMUS EUROPAEUS (European burning bush)	7				98					
	46						clean and dry	stratify 90-120 days at 32-50°F.		
	72		8,770	fall	99			mulch	soon as ripe	2,200
EVONYMUS OXYPHYLLA	72		13,180	early fall	99					
EVONYMUS RADICANS VEGETA (Bigleaf wintercreeper)	46						clean, dry	stratify 90-100 days at 32-50°F.		
EVONYMUS VERRUCOSA	7				99					
EVONYMUS YEDOENSIS	72			fall			dry	mulch	fall	1,100
EXOCOECARIA AGALLOCHA	54		4,000	Aug.-Sept.						
EXOCHORDA (Pearlbush)	26							stratify	fall or spring	
EXOCHORDA GRANDIFLORA (Pearlbush)	46						clean and dry	stratify 50 days at 32-50°F.		
	72			Sept.						

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
FAGOPYRUM ESCULENTUM (Buckwheat)	62		20,000							
	63		20,400							
FAGRAEA FRAGENS	54		7,680 (fruits)							
FAGUS (Beech)	47							stratify	fall or spring	
	50						must not dry	stratify	soon as ripe or stratify	
FAGUS AMERICANA (See F. grandifolia)										
FAGUS GRANDIFOLIA (Beech)	1		1,440			81				
	2			fall			moist			
	12	100	1,800	Oct.		80			fall	
	19	25								
	32			soon as ripe			must not dry	stratify	Mar. (under shade)	200
	72		2,000	fall	95					
	73			fall			moist; must not dry		immediately	
FAGUS SYLVATICA (European beech)	7					45				
	8		2,000							
	54		2,400			7				
	72			fall						
FALLUGIA PARADOXA (Apache-Plume)	13					62				
	17					58		stratify	spring	
	60		420,000	June-July		42		none		
	75		420,000	early summer			dry	none	spring	4,200
FENDLERA RUPICOLA	13					6				
FICUS BENGALENSIS (Banyan tree)	54		384	Apr.-May Oct.-Nov.						

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
FICUS ELASTICA (India rubbertree)	54		320 (fruits)	May-Dec.						
FICUS GLOMERATA (Cluster fig)	54		272	Mar.-Apr. July-Aug.						
FICUS INFECTORIA (Dotted fig)	54		5,600 (fruits)	May-June & Oct.						
FICUS RELIGIOSA (Sacred Bo tree)	54		2,080	Apr.-May Oct.-Nov.						
FICUS RETUSA	54		4,640 (fruits)	Feb.-Apr.						
FICUS ROXBURGHI	54		1,552,000	Sept.						
FILICIUM DECIPIENS	54		1,440			25				
FLEMINGIA CONGESTA	54		25,600	Jan.						
FORESTIERA NEOMEXICANA (Palo blanco)	13					55				
	14					72				
	17					68		stratify 30 days	spring	
	75	19		summer	82		dry	none	fall or spring	4,170
FOTHERGILLA (Witchalder)	47							stratify	spring	
	50						dry	none	spring	
FRAXINUS (Ash)	16		16,345		55					
	47							stratify or sow as soon as ripe		

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt Test %	Germ Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
FRAXINUS AMERICANA (White ash)	1		6,240			80				
	7					50				
	12		6,000	fall		80		stratify		1,200
	15		4,022		44					
	19	53	6,000							
	20		11,172							
	23		10,200			42				
	52		15,360							
	58	98			54					
	67					66		stratify 140 days at 50-60°F.	early fall or stratify	
	72	69	6,450	fall	85		dry	stratify 190 days alternating temperature	soon as ripe	3,120
	73			fall					immediately	
	77		8,480		79			stratify or H_2O	spring	
FRAXINUS ANOMALA (Single-leaf ash)	13					0				
	18		22,050							
FRAXINUS CAMPESTRIS	3	75	16,750	fall or winter			dry	stratify 10-60 days	fall or spring	
FRAXINUS CUSPIDATA (Flowering ash)	17					28				
	14					18				
FRAXINUS DIPETALA (California shrub ash)	60		8,000	July-Sept		56		stratify 90 days		
FRAXINUS EXCELSIOR (European ash)	8		6,500							
	7					55				
	54		4,000 (fruits)							
FRAXINUS FLORIBUNDA	54		4,000 (fruits)							

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt Test %	Germ Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
FRAXINUS LANCEOLATA (See F. pennsylvanica)										
FRAXINUS MANDSHURICA (Mancurian ash)	54		4,960 (fruits)							
FRAXINUS MICRANTHA	54		3,360	Nov.						
FRAXINUS NIGRA (Black ash)	1		2,760							
	27						moist	68°F. 60 days then 41-50°F. 60-90 days		
FRAXINUS OREGONA (Oregon ash)	60		10,000	Aug-Sept.		54		stratify 90 days		
FRAXINUS ORNUS (Flowering ash)	46						dry, cool	stratify 90 days at 32-58°F.		
FRAXINUS OXPHYLLA	54		4,000 (fruits)			16				
FRAXINUS PENNSYLVANICA (Red ash)	1		11,950			49				
	67		7,400					stratify 160 days at 38°F.	fall or stratify	

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt Test %	Germ Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
FRAXINUS PENNSYLVANICA LANCEOLATA (Green ash)	1		16,000							
	2		17,250	fall			dry	60 days at 41°F.		
	5					45		stratify 90 days at 41°F.		
	8		13,590							
	9		17,800		96					
	17					80				
	18		17,623		82					
	19	98								
	20				65			stratify 45-60 days	winter or spring	
	26							stratify	fall or spring	
	28				85			stratify 30 days		
	37	62	15,514							
	73	80	16,000	fall			cool, moist	none	spring	100
	74	61	21,521	fall	76	67	dry	H_2O 2-10 days	fall or spring	170
	75	50		late summer	55			none	early spring	880
	76		17,550	fall	89	82	dry	stratify Nov-Mar.	fall or spring	800
	77		15,200	fall	84	96	dry	stratify or H_2O	spring	1228
FRAXINUS PUBESCENS (See F. pennsylvanica lanceolata)										
FRAXINUS QUADRANGULATA (Blue ash)	1		7,000							
FRAXINUS SYRIACA (See F. oxphylla)										
FRAXINUS VELUTINA (Velvet ash)	21		40,500							
	60		20,000	May-June		60		stratify 90 days		
FRAXINUS VELUTINA CORIACEA (Desert ash)	13					14				
	18		28,800							

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
FRAXINUS VELUTINA TOUMEYI	75			late fall			dry	none	May	
FREMONTODENDRON CALIFORNICUM (Flannel bush)	60		15,000	Aug.-Sept.		50		hot H_2O; stratify		
FREMONTODENDRON CALIFORNICUM VAR. MEXICANUM	60		27,000	July-Aug.		55		hot H_2O; stratify		
GAILLARDIA ARISTATA (Common perrenial faillardia)	13 26			summer		24	dry	none	spring	
GAILLARDIA PINNATIFIDA	13					55				
GALIUM BOREALE	71		756,666							
GARCINIA ECHINOCARPUS	54					1				
GARDENIA LATIFOLIA	54		220 (fruit)	Dec.-Jan.						
GARRYA BUXIFOLIA	60		29,000	Sept.-Oct.		5		stratify 90 days		
GARRYA ELLIPTICA (Silk tassel bush)	60		18,000	Oct.-Dec.		53		stratify 90 days		
GARRYA FREMONTI (Bear bush)	60		26,000	Oct.-Dec.		24		stratify 90 days		
GARUGA PINNATA	54		2,080	June-Nov.		44				1100
GAULTHERIA PROCUMBENS	15		2,835 (berries)		98					
	26			fall			moist	stratify	fall, spring	
	72		163,000		97					
GAULTHERIA SHALLON (Salal)	60		5,000,000	Aug.- Sept.		73		stratify		
	77	4	2,572,000	summer			dry	light required	spring	

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt Test %	Germ Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
GAYLUSSACIA BACCATA	72	3	281,700	summer	95					
GENISTA MONOSPERMA (Bridal-veil broom)	21		5,040							
GENISTA TINCTORIA (Woodwaxen)	8		140,727							
GENTIANA ACAULIS (Stemless gentian)	57						sealed at 40°F.	stratify 30-60 days at 35°F.		
GENTIANA ANDREWSI (Closed gentian)	57						sealed at 40°F.	stratify 30-60 days at 35°F; germinate in light.		
GENTIANA CRINITA (Fringed gentian)	57						sealed at 40°F.	stratify 30-60 days at 35°F.		
GENTIANA LOGODECHIANA	74					40	dry		fall	
GENTIANA PROCERA	71		9,080,000							
GERANIUM INCISUM	60			Aug-Sept		80		none		
GEUM CANADENSE	71		267,058							
GINGO BILOBA (Maidenhair tree)	12	25	520	Oct.	95			stratify		
	15					35				
	47							stratify	fall or spring	
	50							stratify		
	72	25					dry	mulch	fall or spring	50

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
GLEDITSIA TRIACANTHOS (honey locust)	1		2,840			73				
	2		2,900	fall		99		H_2SO_4 two hours		
	3	20	2,900	fall			dry	H_2SO_4 one hour		
	7					75				
	9				94					
	11	25	2,415			96				
	12	25	2,800	fall	85		dry	scarify		
	14					69		scarify or 2 hours H_2SO_4		
	15							KOH		
	16					16				
	18		4,365							
	20							H_2SO_4		
	22		2,400							
	25		3,200			62				
	35					56		H_2SO_4 one hour		
	37	32	2,790			80	dry	H_2SO_4 or stratify		
	47							hot H_2O, stratify	spring	
	50						dry	hot H_2O	spring	
	59				86	58				184
	72	25	2,976	fall and winter	95		dry		spring	1,240
	74	28	2,747	fall	95	72	dry	H_2SO_4	spring	255
	75	36	2,742	fall or winter			dry	H_2SO_4	spring	420
	76		4,350	fall	96	85	dry	H_2SO_4 or hot H_2O	spring	629
	77		2,938	fall	90		dry	none or H_2O	spring	215

Name	Accn. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
GLEDITSIA TRIACANTHOS INERMIS (Thornless honey-locust)	12	25	2,800	fall	90		dry	scarify KOH		
	15									
	22		3,475							
GLUTA TRAVANCORICA	54			May-June		60				10
GLYCYRRHIZA LEPIDOTA	71		52,668							
GMELINA ARBOREA	54			Apr.-May		53				285
GODETIA AMOENA (Lilya)	60		3,400,000	July-Sept.		80		none		
GOSSYPIUM BARBADENSE (Egyptian cotton)	62		4,000							
GRATIOLA VIRGINIANA	71		41,272,727							
GRAYIA SPINOSA (Spiny hop-sage)	77		153,600	summer	21					
GREVILLEA ROBUSTA (silky oak)	21		46,800							
	32						dry	none	spring	
	50						dry	none	late winter (under glass)	
	54		45,200	June						
GREWIA	54		14,240	March						
GREWIA ASIATICA	54		7,760	July-Nov.						
GREWIA ELASTICA (See G. asiatica)										
GREWIA OPPOSITIFOLIA	54		4,880	Oct.-Dec.						

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
GREWIA TILLIAEFOLIA	54		5,600	June-Aug.		8				88
GRINDELIA CAMPORUM (Gumplant)	60		132,000	Aug.-Oct.		44		none		
GRINDELIA SQUARROSA	71		756,666							
GYMNOCLADUS DIOICA (Kentucky coffee-tree)	1		230							
	2		230	fall		90	dry	H_2SO_4 4 hrs.		
	3	40		winter		75	dry	H_2SO_4 4 hrs.		
	12		208	fall	98		dry	scarify		
	16		281		100					
	35					78		H_2SO_4 1 hr.		
	37	50								
	47							H_2O	fall	
	50							H_2O		
	74	30								
	75						dry	H_2SO_4	June	114

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt Test %	Germ Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
HALESIA (Silverbell)	26							stratify	fall or spring	
	47							stratify	soon as ripe or in spring	
	50							stratify 1 yr.		
HALESIA TETRAPTERA (Great silverbell	46						clean, dry	stratify at 70-80°F. for 30-90 days, then at 32-41°F. for 150-210 days		
HALIMODENDRON HALIMODENDRON (Salt-tree)	47						dry	none	spring	
HAMAMELIS (Witch-hazel)	26			late fall				stratify	fall or stratify	
	46						dry-cool	stratify at 41°F. for 150-180 days,		83
	47							stratify at 41°F. for 150-180 days		
HAMAMELIS VIRGINIANA (Witch-hazel)	72		10,890							324
HAPLOPHYTON CIMICIDUM	75			Nov.			dry	none	May	
HARDWICKIA BINATA	54			Apr.-May						550 (fruit)
HARDWICKIA PINNATA	54		66			81				51
HEDOEMA HISPIDA	71		1,681,481 (Nutlets)							
HEDERA (Ivy)	50							stratify 1 yr.	soon as ripe	

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
HEDYSARUM CORONARIUM (French honeysuckle)	60		70,000	Aug.		52		hot H_2O		
HELENIUM MONTANUM	71		1,464,516							
HELIANTHUS ANNUUS (Common sunflower)	17 60 71		32,000 69,049	July-Sept.		96 86		none		
HELIANTHUS GRACILENTUS (Slimstem sunflower)	60		259,000	July-Sept.		43		none		
HELIANTHUS MAXIMILIANI	71		204,044							
HELIANTHUS PETIOLARIS	71		216,190							
HELIANTHUS SCOPARIUM (Rush-rose)	60		1,000,000	June-Sept.		64		none		
HELIANTHUS TUBEROSUS	71		75,666							
HELICTERES ISORA	54		281,600	Dec.-Jan.						
HELIOPSIS SCABRA	71		116,410							
HEMIZONIA WRIGHTI	60		780,000	Sept.-Oct.		26		none		
HERACLEUM LANATUM (Coe parsnip)	60		76,000	July-Sept.		39		none		
HESPERIS MATRONALIS	71		224,197							
HIBISCUS (Hibiscus rosemallow)	47						dry	none	spring	
HICORIA ALBA (Nockernut hickory)	1 15 20	85	113 110	Oct.		85		stratify stratify 60 days	 fall or spring	35

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants lb. Seed
HICORIA CORDIFORMIS (Bitternut hickory)	1		110							
HICORIA GLABRA (Pignut hickory)	1		210			87				
	12		210	Oct.		87		stratify		
	15		200							70
	19	30								
	73		30				moist peat		fall or stratify	
HICORIA LACINIOSA (Bigleaf shagbark)	19	20								
HICORIA OVATA (Shagbark hickory)	1		90			86				
	9							stratify 70-130 days	fall or spring	
	15	85	90	Oct.		85		stratify		30
	19	26	85		90					
	25		80			62				
HICORIA PECAN (Pecan)	1		80							
	3		100	fall				stratify	fall or spring	
	12		100	fall	95			stratify		
	15									35
HIPPOPHAE RHAMNOIDES (Sea-buckthorn)	3	27	25,000	Sept.				stratify	fall or spring	
	7					60				
	8		59,090							
	47							stratify	soon as ripe or spring	
	50							stratify	soon as ripe	
HOLARRHENA ANTIDYSENTERICA	54		16,400	Nov.-May		73				9,700

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per pound	Time to Collect	Cutt Test %	Germ Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
HOLODISCUS DISCOLOR (Rockspirea)	47 50							none	fall fall	
HOLOPTELEA INTEGRIFOLIA	54		13,300			10				5,900
HOMALIUM TOMENTOSUM	5		176,000			2				
HOPEA OPORATA	54		2,000	May		75				1,150
HOPEA PARVIFLORA	54		1600(fruit)	Apr.-May		34				610
HOSACKIA AMERICANA	71		75,666							
HOVENIA DULCIS (Raisintree)	8 54		20,363 36,000	Dec.-Jan.		75				
HUDSONIA TOMENTOSA (Beach-heather)	72		1,950,000	July	82					
HYDNOCARPUS WRIGHTIANA	54		400	May-June						
HYMENOCLEA MONOGYRA (Burrobrush)	17					74				
HYMENOCLEA SALSOLA (White burrobrush)	17					78				
HYMENODICTYON EXCELSUM	54		142,960	Jan.-Apr.		22				26,100
HYPERICUM CORIS	78					95	dry		Fall	
HYPERICUM FORMOSUM	60		1,916,000	July-Sept.		50		none		

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
ILEX (Holly)	47							stratify	spring	
	50							stratify 1 yr.		
ILEX AQUIFOLIUM (English holly)	22		57,000	fall	79					
ILEX DECIDUA (Deciduous holly)	73		29,000					stratify	fall or winter	
ILEX GLABRA (Gallberry)	73	5		winter			moist	depulp; stratify 60 days	late spring	
ILEX MONTANA (Mountain holly)	12			fall and winter				stratify	second spring	
ILEX OPACA (Holly)	12	20	31,000	winter	70			stratify	second spring	
	19	27		fall						
	26							stratify	fall, spring or second fall	
	46						clean, dry	stratify at 75-85°F. 30 days preceded by KOH, HCl, glucose treatment		
	47						dry	KOH+HCl 5 min. each + 5% glucose		
	73	20	21,840	late fall					immediately	
ILEX VERTICILLATA (Winterberry)	2							stratify as for Crataegus		
	12	20	40,000	winter	70			stratify	second spring	
	15		2,050 (berries)		31					

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
ILEX VERTICILLATA (Winterberry)	19	11	129,297	winter			dry	mulch	fall or spring	6,000
(Continued)	58				82					
ILEX VOMITORIA (Youpon)	73		64,000					stratify	fall or winter	
ILYSANTHES DUBIA	71		137,575,750							
INDIGOFERA DOSUA	54		80,800							
INDIGOFERA ENDECAPHYLLA	54		224,000			30				
INDIGOFERA GALEGOIDES	54		47,200			7				
INDIGOFERA HIRSUTA	54		126,400	Nov.						
INDIGOFERA POTANINI (Potanian indigo)	72			Nov.	99			stratify 110 days at 41°F.	spring	22,000
INDIGOFERA PULCHELLA	54		69,600	May		73				
INDIGOFERA STACHYODES (See I. dosua)										
INDIGOFERA TINCTORIA (Indigo)	54		133,600	Jan.		1				
IRIS (Iris)	50								soon as ripe	
IRIS PSEUDOCORUS (Yellowflag iris)	49							stratify 75 days at 32-50°F.		
IRIS VERSICOLOR (Blueflag iris)	72		32,770	late summer	99					
ISOMERIS ARBOREA (Burro fat)	60		5,000	May-July		70		none		

Name	Ref. No.	Lb.Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb.Seed
IVA AXILLARIS	71		162,142							
IVA XANTHIIFOLIA	71		378,333							

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
JASMINUM (Jasmine)	50								soon as ripe	
JUGLANS CALIFORNICA (California walnut)	60		75	July-Aug.		35		sow in peat moss		
JUGLANS CINEREA (Butternut)	15		25	Oct.		30			immed-iately	10
	19	23								
	25		16			77				
JUGLANS HINDSI (Hinds walnut)	60		80	fall				sow in peat moss		
JUGLANS NIGRA (Black walnut)	1		28			88				
	2			fall			hulled, moist		spring or fall	
	3	65	38					remove husks	fall	
	9		39		82					
	12	40	25	Oct.	90			remove husks	immed-iately	12
	18		30							
	20							stratify 15-60 days	fall	
	25		30			78				
	28				90					
	59				89					
	72	41	28	fall	98					
	73		26	fall	90	75	moist peat	stratify	fall or stratify	
	75		30				dry	stratify 90 days	spring	9
	76	52								
	77	30	24	fall			dry	stratify	spring	
JUGLANS REGIA (Persian walnut)	1		40							
	54		38	Sept.-Oct.		77				
JUGLANS RUPESTRIS (Little walnut)	3	65	78	fall				remove husks	fall	

Name	Ser. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
JUGLANS RUPESTRIS MAJOR	28					90				
(Nogal)	75		92	late summer	98	4	dry	stratify 90 days	spring	22
JUNCUS BUFONIUS	71		32,428,571							
JUNCUS TORREYI	71		37,833,333							
JUNIPERUS	47							stratify in winter at 32-50°F. for 30-60 days or soon as ripe	fall or spring	
(Juniper)	50							stratify 1-3 yrs.		
JUNIPERUS ASHEI	3							1 yr. in fruit scarify, stratify at 41°F. 90 days	second fall or second spring	
(Ozark white cedar)	37	20								
JUNIPERUS COMMUNIS	2			3rd Aug.						
(Dwarf juniper)	3	40	30,000	fall			clean	stratify		
	7				92					
	8		25,454							
	9				66					
	11		25,960		24					
	18		32,500							
	20				61			stratify	April	
JUNIPERUS EXCELSA (Greek juniper)	7				77					
JUNIPER HORIZONTALIS (Creeping juniper)	2			second fall						
JUNIPERUS MACROPHYLLA	54		24,000	Oct.						
JUNIPERUS MONOSPERMA	3							stratify 30 or 60 days	fall or spring	
(One-seed juniper)	75	15	18,000	fall	70		dry	stratify 60 days	winter or spring	2,500

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
JUNIPERUS MONOSPERMA (One-seed juniper) (Continued)	77						dry	stratify	fall or spring	3,260
JUNIPERUS OCCIDENTALIS (Western juniper)	77	10	8,000	fall	51		dry	stratify	fall or spring	
JUNIPERUS PACHYPHLOEA (Alligator juniper)	9				85					
	75			winter and spring			moist	stratify	April	
JUNIPERUS PROCERA	54		19,600			5				
JUNIPERUS SABINA (Savin)	54		11,040							
JUNIPERUS SCOPULORUM (Rocky Mountain red cedar)	3			second winter			1 year in fruit	scarify; 41°F. 90 days	second fall or second spring	
	9		28,800		73					
	10		37,455							
	18		28,915							
			7,900 (cones)							
	22		31,592							
	37		20,276							
	59				45					95
	76	22	26,500	fall	39		dry	stratify May	second fall	
JUNIPERUS UTAHENSIS (Utah juniper)	9		7,100		78					
	18		5,500							
	77	25	3,584	fall	20		dry	stratify	fall or spring	
JUNIPERUS VIRGINIANA (Eastern red cedar)	1		17,640			63				
	2			first fall			dry, depulped or moist in flesh			

Name	Lot No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
JUNIPERUS VIRGINIANA (Eastern red cedar) (Continued)	3							stratify 90 days at 41°F.		
	9		39,100		67					
	11	33	18,898		56					
	12	33	33,000	Nov.		63	clean	stratify		
	15	25	17,640	fall		63		stratify at 41°F.		
	18		45,500							
	19	69								
	20				58			stratify	April	
	26							stratify	fall or spring	
	32						must not dry	freeze 30 days in flesh, then clean and plant	winter	
	37	13	42,549	Nov.				freeze 21 days in flesh; then clean and scarify	Mar.	
	46						clean, dry	stratify 65-100 days at 32-50°F.		
	54		46,400			4				
	55	20		fall		56		freeze in ice 21 days, melt, clean, scarify	first fall	
	59				28					4,493
	73		17,000	late fall				stratify - depulp	winter	
	74	15	56,857	fall - winter	61	1	dry	stratify Sept.-Dec.	Dec.	4,493
	76	38	40,000	fall	42		dry	stratify May	second fall	

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
KAYEA ASSAMICA	54		18	Mar.		8				
KOCHIA SCOPARIA	71		534,117							
KOELREUTERIA PANICULATA (Goldenrain tree)	12	100	2,600	Aug.	88			stratify	immediately	
	47							stratify	fall or spring	
	50							stratify	soon as ripe, or stratify	
KURRIMIA PULCHERRIMA	54		3,840							
KYDIA CALYCINA	54		80,000	Dec.-Apr.	12					

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt Test %	Germ Test %	Type Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
LABURNUM ALPINUM (Scotch laburnum)	53		16,000	late summer	99					
LABURNUM VULGARE (Goldenchain)	77		14,900		94	11				
LACTUCA SCARIOLA	71		1,008,888							
LAGERSTROEMIA FLORIBUNDA	54		92,000							
LAGERSTROEMIA FLOSREGINAE	54		23,160	Nov.-Apr.		37				
LAGERSTROMEMIA HYPOLEUCA	54		98,000	Feb.-Mar.		85				
LAGERSTROEMIA INDICA (Crapemyrtle)	26						dry		spring	
LAGERSTROEMIA LANCEOLATA	54		121,600			5				77
LAGERSTROEMIA PARVIFLORA	54		1,200	Dec.-May		2				64
LAGERSTROEMIA TOMENTOSA	54		113,600	Sept.						
LANNEA GRANDIS (See Odina wodier)										
LANSIUM ANAMALAYANUM (See L. praec)										
LANSIUM PRAEC	54					52				
LANTANA ACULEATA (See L. camara)										
LANTANA CAMARA	54		32,800	Nov.						
LAPPULA AMERICANA	71		187,216 (Nutlets)							
LAPPULA ECHINATA	71		336,296							

Name	Ref. No.	Lb.Seed 100 lb. Fruit	No.Clean Seeds per Pound	Time to Collect	Cutt Test %	Germ Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb.Seed
LARIX	47						dry	none	spring	
(Larch*)	50						dry	none	early spring	
LARIX AMERICANA (See L. laricina)										
LARIX DAHURICA	7					33				
(Dahurian larch)	52		80,384							
LARIX EUROPAEA	1		94,805			28				
(European larch)	8		74,727							
	26						dry		spring	
	43					45		30 days at 43°F.		
	51		79,230		50	37				
	52		59,200							3,000
	54		54,400							
	65		75,000			40				8,000
	72		79,290		60	30	dry			6,720
	77						dry		spring	10,000
LARIX KAEMPFERI (See L. leptolepsis)										
LARIX LARICINA	1		89,680							
(Tamarack)	2		295,040	fall		60				
	8		326,818							
LARIX LEPTOLEPSIS	1		110,000							
(Japanese larch)	8		121,227							
	51		123,000		54	50				
	52		77,280							4,000
	54		73,600			23				
	65		100,000			32				10,000
	72		136,980-	Sept.	48	18				10,532
	77						dry		spring	10,000
LARIX OCCIDENTALIS	1	2	152,263			25				
(Western larch)	43					56		43°F.30 days		

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt Test %	Germ Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
LARIX SIBERICA (Siberian larch)	7					33				
	8		42,863							
	43					71		43°F. 30 days		
	51		41,730		27	21				
LATHYRUS LATIFOLIUS (Perennial pea)	26			summer			dry	soak	early spring	
LATHYRUS LITTORALIS	22		7,540							
	77		7,240	summer		40	dry	H_2SO_4 or scarify	early spring	
LATHYRUS MARITIMUS (Seaside pea)	22		12,250							
	77		12,110	summer		65	dry	H_2SO_4 or scarify	early spring	
LATHYRUS STRICTUS	60		6,000	May-June		49		None		
LATHYRUS SULPHUROUS	60		10,000	summer		62		hot H_2O		
LEDUM (Labrador-tea)	47						dry	none	winter or spring (under glass)	
	50						dry	none	spring (under glass)	
LEONURUS CARDIACA	71		585,806 (Nutlets)							
LEPARGYREA ARGENTEA (See Shepherdia argentea)										
LEPIDIUM DENSIFLORUM	71		1,816,000							
LEPIDIUM RAMOSISSIMUM	71		2,063,636							
LEPIDOSPARTUM SQUAMATUM (Broombrush)	60		315,000	summer		66		none		

Name	Ref. No.	Lb.Seed 100 lb. Fruit	No.Clean Seeds per Pound	Time to Collect	Cutt Test %	Germ Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb.Seed
LESPEDEZA (Bush clover)	32						dry	scarify	spring	
LESPEDEZA BICOLOR (Shrub bushclover)	58	33				59				
	72	10		fall	80		dry		April	
	73		92,000	fall	95		dry	scarify	spring	5,600
LESPEDEZA CAPITATA (Roundhead bushclover)	61					84		shake 20 min.		
	72	28		fall	95		dry		April	
LESPEDEZA CYRTOBOTHRYA (Shrub lespedeza)	14					8				
	58	34				81				
	73		82,350	fall	98		dry	scarify	spring	4,100
LESPEDEZA FRUTESCSNS	72	66		fall	95		dry		April	
LESPEDEZA JUNCEA (Shrub lespedeza)	58	27								
	73	50	261,280	fall	89		dry	scarify	spring	29,000
LESPEDEZA SERICEA (Chinese lespedeza)	58					13				
	60		210,000			63		scarify		
	62		335,000							
	63		472,000 (hulled)							
	64					72				
LESPEDEZA STIPULACEA (Korean lespedeza)	62		240,000							
	63		238,080 (with hulls)							
	64					77				
LESPEDEZA STRIATA (Common lespedeza)	62		343,000							
	63		340,160 (with hulls)							
	64					76				
LESPEDEZA STRIATA (Kobe) (Kobe Lespedeza)	62		185,000							
	64					76				

Name	f. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usabl Plant Lb. See
LESPEDEZA VIRGINICA	61					33		shake 20 min.		
LESPEDEZA GLAUCA	54		13,920	Mar.-July		33				530
LEUCOTHOE CATESBAEI (Drooping leucothoe)	86			fall			dry	none	fall or spring (under glass)	
LEWISIA REDIVIVA	78					20	dry		fall	
LIATRIS PUNCTATA (Dotted gayfeather)	13 26			late summer		50	dry	none	fall	
LIBOCEDRUS (Incense cedar)	50						dry	none	spring	
LIBOCEDRUS DECURRENS (Incense cedar)	1 46	4	14,240			29	clean, dry	stratify 30-60 days at 32-50°F.		86
	51		20,000			18				
LIGUSTRUM (Privets)	32 50						clean, moist	none stratify	winter fall - stratify	
LIGSUTRUM AMURENSE (Amur privet)	33 58				22	44				
	72	50	12,000	fall	98					
	73			fall-winter	95		cool-moist	do not clean	winter or spring	
LIGUSTRUM JAPONICUM (Japanese privet)	33				20					
LIGUSTRUM LUCIDUM (Glossy privet)	12 72	40 40	12,500	winter	98		clean	stratify		

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
LIGUSTRUM VULGARE	7				98					
(European privet)	18		13,250							
	46						clean, dry	stratify 90 days at 32-50°F.		
	72			fall	99			stratify 95 days at 41°F	spring	10,000
LINARIA VULGARIS	71		3,242,857							
LINUM LEWISI	13					14				
(Prairie flax)	71		422,325							
LINUM RIGIDUM	71		648,571							
LINUM SULCATUM	71		1,513,333							
LINUM USITATISSIMUM	62		124,125							
(Flax)	63		138,000							
LIPPIA WRIGHTI	17					24				
(Wright lippia)										
LIQUIDAMBAR STYRACIFLUA	1		176,500							
(Red gum)	12		80,000	fall		85		stratify	immediately	
	15	10								
	26			fall			moist	stratify	fall or spring	
	32						dry	none	spring	
	47							stratify	spring	
	50							stratify	soon as ripe	
									stratify	
	58					27				
	73	3	175,000	fall	40	27	dry or moist	stratify	spring	
LIRIODENDRON TULIPIFERA	1		14,280			15				
(Tuliptree)	2		18,000	fall				stratify	fall or spring	

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
LIRIODENDRON TULIPIFERA (Tuliptree) (Continued)	12		14,500	fall	10				immediately	
	15	32								
	19	28	9,926							
	32						keep moist	stratify	fall or spring	
	46						clean	soak 24 hours., freeze 24hrs., then stratify 70 days alternating temperature 32-50°F		
	47							stratify or sow soon as ripe		
	50							stratify soon as ripe	spring	
	58	83			10	14				
	72	32	10,950	fall	10			stratify 200 days in wood ashes	spring	490
	73		16,500		12		moist	none	fall or early spring	
LITHOCARPUS DENSIFLORA (Tanoak)	60		110	fall		78		sow in peat		
LITSEA PANAMONJA	54		160	July-Aug.		90				120
LITSEA POLYANTHA	54		2,400	Nov.-Dec. Jan.-July		61				
LITSEA SEBIFERA	54		3,840	Dec.-Feb.						
LITSEA UMBROSA	54		2,560 (fruit)	Oct.-Nov.		2				
LOBELIA DORTMANNA (Water lobelia)	6			Sept.		89		150 days H_2O at 35°F.		

Name	Ref. No.	Lb.Seed 100 lb. Fruit	No.Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb.Seed
LONICERA (Honeysuckle)	26			fall				stratify		
	37	3								
	50						clean	stratify	soon as ripe or stratify	
LONICERA BELLA	72	4		summer				mulch	fall	17,900
LONICERA BELLA ATROROSEA	72		115,000	summer	93					
LONICERA CHRYSANTHA (Coralline honeysuckle)	72			summer			dry	mulch	fall	3,700
LONICERA HISPIDULA (California honeysuckle)	60		27,000	fall		20		stratify 30 days		
LONICERA INVOLUCRATA (Bearberry honeysuckle)	13					83				
	18		226,850							
	77	3	476,800	early summer						
LONICERA MAACKI (Amur honeysuckle)	12	14		fall			clean	stratify	spring	
	46						dry	stratify 75-90 days at 32-65°F.		
	58				53					
	72		193,500							
LONICERA MAACKI PODOCARPA (Late honeysuckle)	72		134,300	fall	99		dry	mulch	fall or spring	30,300
LONICERA MORROWI (Morrow honeysuckle)	53		190,700							
	72	4	114,250	summer	83					
LONICERA MUENDENIENSIS	72	5		summer			dry	mulch	fall	6,700
LONICERA NOTHA	72	4		summer			dry	mulch	fall	6,700

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
LONICERA TATARICA (Tatarian honeysuckle)	3		145,000	summer			dry	stratify 60 days at 41°F.		
	8		181,818							
	12	12	174,000	July			clean	stratify	spring	
	18		150,400							
	19	2								
	20				80	95			April	
	37		128,430							
	53	4	144,300	summer	97		dry	mulch	fall	11,000
	59				95					1,010
	74	3								
	76	8	150,000	summer	94	72	dry	stratify Dec.-Apr.	fall or spring	
	77	4	124,800	early summer	68					
LONICERA TATARICA SIBERICA (Red tatarian honeysuckle)	3		120,000	summer			dry	stratify 60 days at 41°F.		
LONICERA XYLOSTEUM (European fly honeysuckle)	7					75				
	72	6		summer						
LOPHOPETALUM FIMBRIATUM	54		2,400	July-Sept.		85				
LOTUS AMERICANUS (American deervetch)	60		113,000	late spring		90		scarify		
LOTUS CORNICULATUS	72		417,000	Aug.		83	dry, tight	none or scarify	fall or spring	
LOTUS CRASSIFOLIUS	60		46,000	late spring		25		scarify		
LOTUS GRANDIFLORUS	60		141,000	June		6		scarify		
LOTUS HOSACKIA WRIGHTI	13					7				

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
LOTUS SCOPARIUS (Broom deervetch)	60		436,000	early summer		54		scarify		
LOTUS STRIGOSUS	60		603,000	May		52		scarify		
LOTUS TRISPERMUS	17					22				
LOTUS WRIGHTI (See L. hosackia vrighti)										
LUDWIGIA ALTERNIFOLIA	71		15,929,824							
LUPINUS ALBICAULIS	60		38,000	summer				fresh seed none; stored seed hot H_2O		
LUPINUS ANDERSONI	60		11,000	summer		77		fresh seed none; stored seed hot H_2O		
LUPINUS ARBOREUS	60		9,000	summer		38		fresh seed none; stored seed hot H_2O		
LUPINUS ARGENTEUS	13					64				
LUPINUS COLUMBIANUS	60		11,000	summer		42		fresh seed none; stored seed hot H_2O		
LUPINUS EXCUBITUS	60		27,000	early summer		92		fresh seed none; stored seed hot H_2O		
LUPINUS FORMOSUS	60		19,000	June		93		fresh seed none; stored seed hot H_2O		
LUPINUS HIRSUTISSIMUS	60		23,900	May		61		fresh seed none; stored seed hot H_2O		
LUPINUS LATIFOLIUS	60		34,600	summer		78		fresh seed none; stored seed hot H_2O		
LUPINUS LITTORALIS	77			summer		65	dry		early spring	

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
LUPINUS LONGIFOLIUS	60		24,000	spring		92		fresh seed none; stored seed hot H_2O		
LUPINUS PERENNIS (Sun-dial lupine)	51		18,800			86				
LUPINUS STIVERSI	60		21,000	late spring		96		fresh seed none; stored seed hot H_2O		
LUPINUS SUCCULENTUS	60		13,000	May-June		85		fresh seed none; stored seed hot H_2O		
LUPINUS TORREYI	60		59,000	summer		30		fresh seed none; stored seed hot H_2O		
LUPINUS TRUNCATUS	60		57,000	May		32		fresh seed none; stored seed hot H_2O		
LYCHNIS DRUMMONDI (Drummond campion)	13 26			summer		89	moist	stratify		
LYCIUM (Lycium)	47								soon as ripe	
LYCIUM ANDERSONI (Water jacket)	17					68				
LYCIUM CHINENSE (Chinese matrimony vine)	72		170,800	fall	99		dry		spring	24,000
LYCIUM EXSERTUM	17			spring and summer		94	dry	none	spring	
	75			late fall		94	clean, dry	none	spring	
LYCIUM HALIMINFOLIUM	72		260,000	fall	99		dry		spring	29,000
LYCIUM PALLIDUM	75	7		summer			dry			

Name	Ref. No.	Lb.Seed 100 lb. Fruit	No.Clean Seeds per pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb.Seed
LYCIUM RICHI	60		1,371,000	June		11		none		
LYCOPUS AMERICANUS	71		3,026,666 (Nutlets)							
LYCOPUS LUCIDUS	71		908,000 (Nutlets)							

Name	No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
MACARANGA DENTICULATA	54		54,000							
MACARANGA INDICA	54		20,000							
MACARANGA PUSTULATA	54		15,520	Oct.-Nov.		50				7,000
MACHILUS EDULIS	54		13 (fruits)	Nov.-Dec.		30				
MACHILUS GAMBLEI	54		1,600	May-June		40				
MACHILUS GAMMIEANA	54		144	Nov.-Dec.		90				
MACHILUS ODORATISSIMA	54		1440(fruit)	Apr.						
MACLURA POMIFERA (Osage-orange)	1		12,500			77				
	2		11,630	fall			dry	5 days H_2O; or stratify 60 days		
	3		12,000	after frost				none or stratify		
	9		7,400							
	12	3	5,750	fall		77	dry			
	16		11,159		96	23				
	17					20				
	18		16,000							
	19	10								
	20				70			none or stratify 15-30 days	April	
	25		13,120			77				
	30		13,200			85				
	32						dry	none	spring	
	37	2	14,565							
	47						dry	H_2O 2 days	spring	
	50						dry	none	spring	
	58					70				
	59				86					546
	72	3								
	73	3	12,500	fall	90	74	moist sand	depulp	spring	575
	74	2	15,231	fall - winter	81	34	dry	none	fall or spring	513
	75	5	12,000	winter	92		dry	none	spring	919

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
MACROCALYX SP.	71		73,821							
MADIA ELEGANS (Common madia tarweed)	60		159,000	summer		87		none		
MAGNOLIA (Magnolia)	26			soon as ripe			must not dry	stratify	soon as ripe	
	50						moist	stratify	soon as ripe	
MAGNOLIA ACUMINATA (Cucumber tree)	1		3,140							
	8		1,909							
	12		3,000	Oct.	71		clean	stratify		
	15	4								
	46						clean, moist	stratify 180 days at 41°F.		
	67							remove pulp; stratify 150-180 days at 36-40°F.	fall or stratify	
	72	4	13,000	fall					fall	
MAGNOLIA CAMPBELLI	54		6,400	Oct.-Nov.		50				
MAGNOLIA GRANDIFLORA (Evergreen magnolia)	1		1,957							
	32			Sept.				depulp; stratify	fall or stratify	
	46						clean, moist or dry	stratify 120-150 days at 50°F.		
MAGNOLIA SALICIFOLIA (Anise magnolia)	53		3,580	fall	97					
MAGNOLIA TRIPETALA (Umbrella magnolia)	53		1,660		99					
MAHONIA (See Berberis)										
MAIANTHEMUM CANADENSE	49							stratify 140 days at 32-50°F.		
MALLOTUS ALBUS	54		19,200							

Name	Ref. No.	Lb.Seed 100 lb. Fruit	No.Clean Seed per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb.seed
MALLOTUS PHILIPPINENSIS	54		5,005	Mar.-May		48				
MALUS (Crab apple)	46						clean,dry	soak 48 hrs., then stratify at 32-50°F. for 14-90 days		
MALUS BACCATA (Siberian crab)	3	3	77,000	fall			dry	75 days at 41°F.		
	7				90					
	18		85,000							
	29		22,000							
	76	4								
MALUS CORONARIA	72	1		fall						
MALUS FLORIBUNDA (Japanese flowering crab)	72		59,130	fall						
MALUS FUSCA (Western crabapple)	77	2	10,900	Sept.	99		dry	stratify	spring	
MALUS ROBUSTA	72		16,900	fall	90					
MALUS SARGENTI (Sargent crab)	72		70,400	fall	99					
MALUS SYLVESTRIS (Apple)	7				90					
	8		13,636							
	29		11,000							
MALUS ZUMI (Zumi crab)	72									6,752
MANGIFERA INDICA (Mango)				Apr.-May						
MARRUBIUM VULGARE (Horehound)	60		462,000	throughout summer			52	none		

Name	Ref. No.	Lb.Seed 100 lb. Fruit	No.Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb.Seed
MALVA BOREALIS	71		286,714							
MATRICARIA SUAVEOLENS	71		3,492,307							
MEDICAGO ARABICA (Southern bur clover)	64		24,720			11				
MEDICAGO HISPIDA (California bur clover)	60		142,000	May		12		none		
	62		209,000							
	64		31,700 (burs)			10	dry		early fall	
MEDICAGO LUPULINA	62		300,000			75				
	64		289,834			73			fall & early spring	
	71		378,333							
	72		325,000	July		87	dry-tight	none	spring	
	77			summer		82	dry	scarify	early spring	
MEDICAGO SATIVA (Alfalfa)	62		220,000							
	63		226,720							
	64					81				
	71		245,405							
	72		220,000	Sept.		85	dry-tight	none or scarify	spring	
MEIBOMIA ACUMINATA (See Desmodium)										
MEIBOMIA CANADENSIS	71		73,225							
MELIA	32						dry	none	spring	
	50								soon as ripe	
MELIA AZADIRACHTA	54		2,140	Mar.-Aug.		29				214

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
MELIA AZEDARACH	17					60				
(Chinaberry)	54		640 (fruit)	Nov.-Feb.		65				130
MELIA DUBIA	54		1,440 (fruit)							
MELIA INDICA (See M. azadirachta)										
MELILOTUS ALBA	62		250,000							
(Sweet clover)	63		258,560							
	64					71				
	71		227,000							
	72		235,000	Aug.		90	dry-tight	none or scarify	spring	
	77			summer		77	dry	scarify	early spring	
MELILOTUS ALBA ANNUA (White sweet clover)	64					47				
MELILOTUS INDICA	62		300,000							
(Sour clover)	64		334,493	spring		41	dry		fall	
MELILOTUS OFFICINALIS	77			summer		71	dry	scarify	early spring	
MELOCANNA BAMBUSOIDES	54			July						11
MENODORA SCABRA	17			early summer		70	dry	none	spring or summer	
	75		102,500			99	dry	none	spring	
MENODORA SCOPARIA	17					2	dry	none	spring or summer	
MENISPERMUM DAURICUM (Asiatic moonseed)	8		5,909							

Name	Ref. No.	Lb.Seed 100 lb. Fruit	No.Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb.Seed
MENTHA CANADENSIS	71		4,540,000 (Nutlets)							
MESEMBRYANTHEMUM CROCEUM	60		292,000	June-Aug.		22		none		
MESPILUS GERMANICA (Medlar)	7				62					
MESUA FERREA	54		144	July-Apr.		55				83
MICHELIA CHAMPACA	54		7,520	Mar.-Dec.		75				2,900
MICHELIA EXCELSA	54		4,800	Oct.-Dec.		40				1,000
MICHELIA LANUGINOSA	54		3,360	Nov.-Jan.		5				
MICHELIA MONTANA	54		2,400	Aug.-Sept.		22				
MICHELIA OBLONGA	54		2,800	Aug.-Sept.		39				
MILIUSA VELUTINA	54		1,131							
MIMOSA (Catclaw)	26						dry	soak	spring	
MIMOSA BIUNCIFERA (Catclaw)	17					20				
MIMOSA DYSOCARPA (Velvetpod mimosa)	17					48				
MIMULUS CARDINALIS (Monkey flower)	60		22,000,000	June-Aug.		95		none		
MIMULUS LANGSDORFII	78					65	dry		fall	
MIMULUS RINGENS	71		45,400,000							

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Stora	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
MIMUSOPS ELENGI	54		928	June-July						
MITCHELLA REPENS (Partridgeberry)	72	12	198,400	fall	99					
MITRAGYNA DIVERSIFOLIA	54		672 (fruit)							
MITRAGYNA PARVIFOLIA	54		4,800,000	Dec.-Feb.						
MONARDA FISTULOSA	71		1,418,750 (Nutlets)							
MONARDELLA ODORATISSIMA	60		600,000	July-Sept.		18		fresh seed none; stored seed stratify 90 days		
MONOLEPIS NUTTALLIANA	71		1,375,757							
MORINDA CITRIFOLIA (Indian-mulberry)	54		2,880							
MORUS (Mulberry)	47						dry	none	fall or spring	
MORUS ALBA (White mulberry)	1		200,000							
	2		313,873	summer		81	cold, dry or moist	60 days at 41°F.		
	3	2		spring			cold, dry	60 days at 41°F.		
	7				90					
	12	3	350,000	spring		95	dry			
	18		272,200		83					
	19	1								
	26						dry		spring	
	37	6	294,099							
	43				49	26		50 days at 43°F.		
	54		206,400	May	50					

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
MORUS ALBA	59				81	73				6,062
(White mulberry) (Continued)	72	3		late spring						
	74	2	304,233	early summer	98	60	dry	none	spring	5,583
	75		169,881	early summer	80		dry	none	spring	7,580
	76	3					dry	stratify	spring	2,720
	77		180,800		63		dry			3,300
MORUS INDICA	54		230,400	Mar.-Apr.		8				
MORUS LAEVIGATA	54		112,000	Apr.-June		41				
MORUS NIGRA	3	2		spring			cold, dry	60 days at 41°F.		
(Black mulberry)	7				92					
MORUS RUBRA	1					46				
(Red mulberry)	2		313,873	summer		81	cold, dry or moist	60 days at 41°F.		
	3	2		spring			cold, dry	60 days at 41°F.		
	12	3	200,000	spring		46	dry			
	32			June			clean	none	immediately	
	53	25								
	72	3		late spring	92		dry	none	soon as ripe	6,172
	73		425,000	spring	92	50	dry	depulp	immediately or second spring	
MURRAYA KOENIGI	54		2,080	July-Oct.						
MYRICA (Waxmyrtle; bayberry)	50						clean	stratify	soon as ripe or stratify	

Name	Ref. No.	Lb Seed 100 lb. Fruit	No. Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
MYRICA CALIFORNICA	[illegible]		[illegible]	Sept.		60		stratify 90 days		
MYRICA CAROLINENSIS (Bayberry)	[illegible]						clean, dry	stratify 90 days at 41° F.		
	[illegible]	[illegible]	[illegible]	Fall - winter	90		dry	remove wax, stratify 90 days	spring	5,600
[illegible]	5A		[illegible]							
MYRISTICA KINGI	5A		[illegible]							
MYRISTICA [illegible]	5A		27							
[illegible]	5A		6,000 (fruit)	[illegible]						

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
NANDINA DOMESTICA (Nandina)	26						must not dry	stratify	fall or spring	
NAUCLEA EXCELSA	54		85 (fruit)							
NEMOPANTHUS (Mountain holly)	50							stratify	soon as ripe or stratify	
MEMOPANTHUS MUCRONATA (Mountain holly)	15		1600 (berries)		49					
	72	9	37,000	late summer	98					
NEPETA CATARIA	71		908,000 (nutlets)							
NESLIA PANICULATA	71		148,852							
NICOTIANA GLAUCA (Tree tobacco)	60		10,000,000	June		80		none		
NOLINA BIGELOVI	17					74	dry	none	spring and summer	
NOLINA MICROCARPA	14					0				
	17					91	dry		fall or winter	
NYMPHAEA TUBEROSA (White water lily)	6			Aug.		56		210 days H_2O at 35°F.		
NYSSA (Tupelo)	47							stratify	soon as ripe; or spring	
	50							stratify 1 yr.	soon as ripe	

Name	Ref. No.	Lb. Seed 100 Lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Years Lb. Seed
NYSSA AQUATICA (Tupelo)	32							stratify; old stratified seed OK	fall or stratify	
NYSSA SESSILIFLORA	54		7,040			33				
NYSSA SYLVATICA (Black gum)	1		2,840							
	12	25	4,000	fall	98			stratify		
	72	25								

Name	Ref. No.	Lb.Seed 100 lb. Fruit	No.Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb.Seed
ODINA WODIER	54		4,320	May-June		43				
OENOTHERA BIENNIS	71		1,375,757							
OENOTHERA HOOKERI (Evening primrose)	60		1,400,000	summer		70		none		
OLAX SCANDENS	54		3,040							
OLEA CUSPIDATA	54		3,920	Sept.-Jan.		64				1,450
OLEA EUROPAEA (Olive)	50						clean	scarify or NaOH		
OLEA GLANDULIFERA	54		1,600	Feb.		29				
OLNEYA TESOTA (Tesota)	17					0				
ONOSMODIUM OCCIDENTALE	71		32,198 (nutlets)							
OROXYLUM INDICUM	54		4,240	Dec.-Feb.		65				
ORTHOCARPUS LUTEUS	71		3,492,307							
OSMARONIA CERASIFORMIS (Indian plum)	50							stratify soon as ripe	soon as ripe or stratify	
	60		1,800	late summer		100		stratify 75 days		
OSTRYA (Hophornbeam)	47							stratify soon as ripe	soon as ripe or stratify	
	50							stratify	soon as ripe	
OSTRYA VIRGINIANA (Hophornbeam)	2			summer					summer	
	13					0				

Name	Ref. No.	Lb.Seed 100 Lb. Fruit	No.Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb.Seed
OSTRYA VIRGINIANA (Hophornbeam) (Continued)	18		30,240							
	76	21								
OUGEINIA DALBERGIOIDES	54		13,920	May-June		58				3,350
OXALIS CYMOSA	71		1,915,611							
OXALIS STRICTA	71		3,026,666							
OXYDENDRUM ARBOREUM (Sourwood)	47								winter or spring (under glass)	
	50								soon as ripe (under glass)	
OXYTROPIS LAMBERTII	71		518,857							

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
PAEONIA BROWNI (Western peony)	60		2,000	late spring		42		stratify 75 days		
PALAQUIUM BOURDILLONI	54		50							
PALAQUIUM ELLIPTICUM (See Bassia elliptica)										
PALAQUIUM POLYANTHUM (See Bassia polyantha)										
PALIURUS SPINA-CHRISTI (Christ thorn)	7					60				
PARASHOREA (See Shorea)										
PARKINSONIA ACULEATA (Horse bean)	60		12,000	May-July		100		boiling H_2O		
PAROSELA GREGGI	17					16				
PAROSELA POGONANTHERA (See Dalea pogonthera)										
PAROSELA SCHOTTI	60		13,900	June		99		none		
PAROSELA SCOPARIA	14					50				
	17					32				
	75		113,300	Aug.			dry	none	spring	
PARRYELLA FILIFOLIA	14					41		hot H_2O		
	17					38				
	75		73,548	fall	98		dry	none	spring	5,800
PARTHENIUM ARGENTATUM	75			Nov.			dry	none	spring	
PARTHENOCISSUS QUINQUEFOLIA (Virginia creeper)	2			Sept.			dry			
	12	25	12,000	Oct.	95			stratify		
	18		19,950							
	19	27								

Name	[illegible]	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
PARTHENOCISSUS QUINQUEFOLIA (Virginia creeper) (Continued)	20				69			stratify	Nov. or spring	
	35				44		dry	none	spring	
	47							stratify	fall or spring	
	72	18	14,420	fall	98		dry		fall or spring	6,900
	75	16		fall	91		dry	none	spring	
	76	25								
	77	16	9,760	fall	99	99	dry	stratify	spring	3,200
PARTHENOCISSUS TRI-CUSPIDATA (Boston ivy)	72			fall						
PAULOWNIA TOMENTOSA (Paulownia)	12	25	900,000	fall			dry			
	15		800,000			25				
	32						dry	none	spring	
	47						dry	none	spring	
	50						dry	none	spring	
	51					95				
PELTANDRA VIRGINICA (Arum)	6			Sept.		96		210 days H_2O at 35° F.		
PENNISETUM PURPUREUM (Napier grass)	54			Jan.		40				
PENTHORUM SEDOIDES	71		45,400,000							
PENTSTEMON AMBIGUUS	78					90	dry		fall	
PENTSTEMON ANTIRRHINOIDES (Snapdragon pentstemon)	60		2,000,000	spring		62	none			

Name	Ref. No.	Lb.Seed 100 lb. Fruit	No.Clean Seeds per Pound	Time to Collect	Germ. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb.Seed
PENTSTEMON BREVIFLORUS	60		5,000,000	throughout summer		21		none		
PENTSTEMON CENTRANTHIFOLIUS	60		255,000	throughout summer		52		none		
PENTSTEMON DEUSTUS	60		496,000	summer		100		none		
PENTSTEMON HETEROPHYLLUS	60		1,000,000	summer		34		none		
PENTSTEMON NEWBERRYI	60		1,500,000	late summer		30		none		
PENTSTEMON PALMERI	60		294,000	June				none		
PENTZIA INCANA (Sheepbush)	17					8	dry	none	spring and summer	
	75			summer						
PENTZIA SPHAEROCEPHALA	17					22				
PEREZIA MICROCEPHALA (Sacapellote)	60		320,000	late spring		25		none		
PERICOPSIS MOONIANA	54		1,456	Feb.						
PETALOSTEMON PURPUREUM	71		349,230							
PETALOSTEMON VILLOSUM	71		232,820							
PETTERIA RAMENTACEA	72		21,700	late summer	98					
PHACELIA CALIFORNICA (Rock phacelia)	60		368,000	throughout summer	65			stratify		
PHACELIA PARRYI	60		1,468,000	June	44			none		

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
PHACELIA TANACETIFOLIA	60		450,000	May-June		7		none		
PHACELIA VISCIDA	60		2,443,000	June		25		none		
PHASEOLUS ACONITIFOLIUS (Moth bean)	73			Sept.			dry		spring	
PHELLODENDRON (Corktree)	26							stratify	fall or spring	
	47						clean		Feb.	
PHELLODENDRON AMURENSE (Amur corktree)	8		36,363							
	72		30,140	fall	98					
PHELLODENDRON LAVALLEI	72		32,000	fall	98					
PHILADELPHUS (Mockorange)	26						dry		spring	
	47						dry	none	spring	
PHILADELPHUS GORDONIANUS (Gordon mockorange)	22		1,507,200							
PHILADELPHUS LEWISI (Lewis mockorange)	60		8,000,000	fall		52		stratify		
	77		3,489,444	fall						
PHILADELPHUS MICROPHYLLUS (Littleleaf mockorange)	13					69				
PHILLYREA (Phillyrea)	50								soon as ripe	
PHOEBE	54		176							
PHOEBE ATTENUATA	54		810	May-July		65				
PHOEBE HAINESIANA	54		400	Sept.-Nov.		70				

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
PHOEBE LANCEOLATA	54		3,200							
PHOTINIA GLABRA	46						clean	stratify 30 days at 41-50°F.		
PHOTINIA SALICIFOLIA (Christmasberry, toyon)	60		24,000	Oct.		73		fresh seed none; stored seed stratify		
PHYLLANTHUS EMBLICA	54		43,200	Dec.-Apr.						3,950
PHYSOCARPUS (Ninebark)	47						dry	none	spring	
PHYSOCARPUS CAPITATUS (Ninebark)	60		822,000	summer		67		none		
	77	12	190,400			70				
PHYSOCARPUS OPULIFOLIUS (Ninebark)	8		454,545							
	15		1,661,180							
	20		73,200		59			stratify	fall or May	
	72			fall			dry	mulch	fall or spring	30,000
PICEA AJANENSIS (See P. jezoensis)										
PICEA ALBA (See P. glauca)										
PICEA CANADENSIS (See P. glauca)										
PICEA CANADENSIS ALBERTIANA (See P. glauca albertiana)										
PICEA ENGELMANNI (Engelmann spruce)	1	1	162,202			51				
	8		131,363							
	25					67				
	43				77	72		none		
	46						sealed, dry	stratify 60 days at 32-41°F.		

Name	Ref. No.	Lb. Seed 100 Lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
PICEA ENGELMANNI	51		151,140			92				
(Engelmann spruce)	52		136,288							
(Continued)										
PICEA EXCELSA	1		59,466			54				
(Norway spruce)	8		55,450							
	25		84,160							
	41						sealed, dry at 5-41°F. OK 6 yrs. or more			
	43				79	75		30 days at 43°F.		
	46						dry, sealed	stratify 60 days at 32-41° F.		
	51		61,700			86				
	52		49,184							8,100
	54		53,600			61				
	65		60,000			75				14,000
	72	1	57,912	fall	90	80	cold, dry			14,485
	77		55,600		63		dry		spring	34,100
PICEA GLAUCA	1		232,069			40				
(White spruce)	8		142,500							
	15		232,060	fall		40		stratify 32°F. 60 days		
	19		141,800	fall						
	20		263,780		96		dry		May	
	25					67				
	31						36°F. dry, tight carboys			
	43				54	44		30 days at 43°F.		
	46						clean, dry, tight; 32-40°F.	stratify 60 days at 32-41°F.		
	51		146,500			75				
	52		136,288							12,700

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
PICEA GLAUCA ALBERTIANA	10		176,742		100		dry			
(Western white spruce)	15		183,000	fall		50		stratify 32°F. 60 days		
	76	2	180,000	late summer	92	68	dry	none	late spring	
PICEA GLEHNI (Sakhalin spruce)	52		118,688							
PICEA JEZOENSIS	8		178,181							
(Yeddo spruce)	51					9				
PICEA KOYAMAI (Koyama spruce)	52		84,064							
PICEA MARIANA	1		540,000							
(Black spruce)	25					67				
	46						dry, sealed	stratify 60 days at 32-41°F.		
	51		151,300			79				
PICEA MORINDA (See P. smithiana)										
PICEA NIGRA (See P. mariana)										
PICEA OBOVATA	8		94,590							
(Siberian spruce)	51		78,820		90	90				
PICEA OMORIKA	8		119,545							
(Siberian spruce)	46						dry, sealed	stratify 30-60 days at 32-50°F.		
PICEA ORIENTALIS	8		62,272							
(Oriental spruce)	51		58,885		84	76				
	54		36,800			12				
PICEA POLITA (Tigertail spruce)	51					21				

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
PICEA PUNGENS (Blue spruce)	1	2	96,000			63				
	8		107,954							
	15		94,270	fall		63		stratify 60 days at 32°F.		
	17					52				
	18		91,550		99					
	20				95		dry		May	
	25					67				
	35							none		
	46						dry	stratify 60 days at 32-50°F.		
	51		120,425			97				
	52		108,960							
	76	2	90,000	late summer	96	90	dry	none	late spring	
PICEA RUBRA (Red spruce)	1	2	134,600			60				
	25					67				
	43				59	54		30 days at 43°F.		
	46						dry, sealed	stratify 30-60 days at 32-50°F.		
PICEA SMITHIANA (Himalayan spruce)	8		32,722							
	54		29,120	Oct.-Nov.		31				8,750
PICEA SITCHENSIS (Sitka spruce)	1		258,500			32				
	8		181,818							
	46						dry, sealed	stratify 30-60 days at 32-50°F.		
	51		228,570			40				
	54					35				
	65		250,000			55				25,000
PICRUS ECHIOIDES (Bristly ox-tongue)	60		605,000	throughout summer		14		none		
PIERIS FLORIBUNDA (Mountain andromeda)	8		1,363,636							

Name	Ref. No.	Lb.Seed 100 lb. Fruit	No.Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb.Seed
PIERIS JAPONICA (Japanese andromeda)	8		3,030,000							
PINUS ALBICAULIS (Whitebark pine)	1		2,874			20				
PINUS ARISTATA (Bristlecone pine)	1	2	16,174			66				
	43					67		none		
	51		20,636			95				
PINUS ATTENUATA (Knob-cone pine)	43				57	22		30 days at 43°F.		
	51		21,620			12				
PINUS AUSTRIACA (See P. nigra)										
PINUS BANKSIANA (Jack pine)	1	1	128,800			53				
	8		116,818							
	19		112,800							
	20		163,034		88		dry		Nov. or May	
	46						dry	stratify 60 days at 32-50°F.		
	51		137,590		75	70				
	52		98,940							1,400
	72	1	123,600	fall	87	50	dry			
	77						dry		spring	6,300
PINUS BUNGEANA (Lacebark pine)	22		3,620							
PINUS CALABRICA (See P. nigra)										
PINUS CARIBAEA (Slash pine)	1	2	15,500			50				
	12		15,500			60			early spring	
	32			Sept.			dry	none	early spring	4,000
	33				50					

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
PINUS CARIBAEA (Slash pine) (Continued)	41						sealed, dry at 5-41°F. OK 1 or 2 yrs. only			
	43					23		30 days at 43°F.		
	58					30				
	66					93	sealed, dry, 30-40°F. 6 yrs. OK			
	73	1	17,000	fall	64	40	dry, cool, tight	stratify 30 days	early spring	1,500
PINUS CEMBRA (Stone pine)	8		17,995							
	46						dry, sealed	stratify 60 days at 32-50°F.		
PINUS CEMBRA SIBERICA (Siberian stone pine)	7				82					
	51		2,008		88	17				
PINUS CLAUSA (Sand pine)	1		74,400							
PINUS CONTORTA (Lodgepole pine)	1	1	81,560							
	8		134,318							
	10		70,824		100		dry			
	18		85,750		99					
	22		100,600							
	46						dry	stratify 60 days at 32-50°F.		
	54		108,800			36				
	77	5		fall	24					
PINUS COULTERI (Coulter pine)	8		1,363							
	46						dry	stratify 30-60 days at 32-41°F.		

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time To Plant	Usable Plants Lb. Seed
DENSIFLORA	1		44,300							
anese red pine)	19	2	41,600	fall						
	46						dry	stratify 30-60 days at 32-50°F.		
	51		52,000			78				
ECHINATA	1	2	69,200			60				
rtleaf pine)	12		47,000	Oct.		35			early spring	13,756
	15						dry	90 days at 32°F.		
	32			Oct.			dry	stratify 15-30 days at 35°F.	fall or early spring	12,000
	33				90					
	41						sealed, dry 5-41°F. OK 1-2 yrs. only			
	46						sealed, dry	stratify 30-60 days at 32-50°F.		
	58				65	18				
	59				18					6,626
	66					86	dry, sealed 30-40°F. 6 yrs. OK			
	72	3	52,610	fall	90	64				
	73		47,000	fall	89	37	dry, cool, tight	stratify 30-60 days	winter	5,000
	74		50,815		80	40	dry	none	spring	6,626
EDULIS	9		1,766		96					
on)	35					85		stratify		
	75		1,800	Sept.	94		dry	none	spring	920
EXCELSA	1		10,063			62				
alayan pine)	46						dry	stratify 90 days at 32-50°F.		
	51					86				
	54		8,800	Sept.-Nov.		63				4,375

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
PINUS FLEXILIS (Limber pine)	1	2	5,500			36				
	10		5,461		91		dry			
	18		5,800							
	35					80		stratify		
	46						dry, sealed	stratify 30-60 days at 32-50°F.		
	51		4,280			67				
	75		4,000	fall	95		dry	none	spring	2,330
PINUS GERARDIANA	8		1,500							
	54		1,200	Sept.-Oct.						
PINUS GLABRA (Spruce pine)	1		77,500							
PINUS HALEPENSIS (Aleppo pine)	17			late summer			dry	none	Feb.	
	43					72		none		
	77		30,160		99					
PINUS INSIGNIS (See P. radiata)										
PINUS JEFFREYI (Jeffrey pine)	1	2	3,100							
	8		3,590							
PINUS KHASYA	54		1,472	Feb.-Mar.		6				
PINUS KORAIENSIS (Korean pine)	1		800							
	8		909							
	46						dry, sealed	stratify 60-90 days at 32-50°F.		
PINUS LAMBERTIANA (Sugar pine)	1	3	2,233			66				
	46						dry, sealed	stratify 90 days at 32-50°F. preceded by 4 days H_2O and 2 days at 32°F.		
	51		2,415			34				

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
PINUS LARICIO (See P. nigra)										
PINUS LARICIO AUSTRIACA (See P. nigra)										
PINUS LONGIFOLIA	8		9,727							
	54		4,560	Jan.-June		81				1,500
PINUS MERKUSI	54		12,000	Apr.-May						
PINUS MITIS (See P. echinata)										
PINUS MONOPHYLLA (Singleleaf pinon)	51		1,230			14				
PINUS MONTANA (Swiss mountain pine)	8		55,318							
	43				53	42		30 days at 43°F.		
PINUS MONTANA GALLICA (Swiss mountain pine)	51		53,400			84				
PINUS MONTANA MUGHUS	43					75		30 days at 43°F.		
PINUS MONTANA PUMILIO (Scrubby Swiss pine)	8		88,818							
PINUS MONTANA UNCINATA (Large Swiss pine)	51		60,000			87				
PINUS MONTICOLA (Western white pine)	1	1	23,500			31				
	8		18,954							
	46						dry	stratify 60-90 days at 32-50°F., or 45 min. H_2SO_4		
	51		16,100			18				
PINUS MURICATA (Bishop pine)	1		51,484							

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
PINUS MURRAYANA (See P. contorta)										
PINUS NIGRA (Austrian pine)	1		24,900			64				
	8		24,090							
	37		29,430							
	43					93		30 days at 43°F.		
	46						dry, sealed	stratify 30-60 days at 32-50°F.		
	51		30,000			82				
	54		49,600			30				
	59				12	11				337
	65		25,000			70				6,000
	72	2	17,456		99	98	cold			9,600
	74		22,559		97	43	dry	none	spring	337
	77		22,400		99	50	dry			3,782
PINUS NIGRA POIRETIANA (Corsican pine)	65		31,000			70				7,500
PINUS PALUSTRIS (Longleaf pine)	1	3	5,700			50				
	8		6,363							
	12		5,400	Oct.		50			early spring	
	32			early fall			dry, cold	none	spring	1,000
	33				45					
	41						sealed, dry, 5-41°F. OK 1 or 2 yrs. only			
	46						dry, sealed	stratify 30 days at 32-50°F.		
	58					71				
	66					60	dry, 12% H_2O or less; 30-40°F. 2 yrs. OK			
	73	1	5,228	fall	58	54	dry, cool, tight	dewing	spring	1,035

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
PINUS PARVIFLORA (Japanese white pine)	51		3,150			40				
PINUS PEUCE (Macedonian pine)	1		13,263							
	8		13,454							
PINUS PINASTER (Cluster pine)	1		9,435			81				
	51		7,200			88				
	54		10,720							
	65		8,000			66				
	77						dry		spring	975
PINUS PINEA (Italian stone pine)	8		545							
PINUS PONDEROSA (Western yellow pine)	1		15,955	(Rocky Mt. Form)						
	1	2	9,300	(Pacific Coast Form)						133
						50				
	3		15,000	Aug.-Sept.			dry, tight			
	8		15,090	(Rocky Mt. Form)						
	8		9,909	(Pacific Coast Form)						
	18		14,800		85					
	20				81				Nov. or May	
	33				97					
	35							none		
	37		11,002							
	41						sealed, dry at 5-41°F. OK for 6 yrs. or more			
	43				73	67		30 days 43°F.		
	46						dry, sealed	stratify 30-60 days at 32-50°F.		
	59				40	34				1,471
	74		12,000		75	37	dry	none	spring	1,471
	75		15,000	fall	80		dry	none	spring	9,500
	76	2	14,800	fall	78	72	dry	none	late spring	

Name	Rep. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cut Test %	Germ Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
PINUS PONDEROSA (Western yellow pine) (Continued)	77	0	15,065	(Pacific Coast Form) early fall	84	57	dry		spring	1,300
	77		9,700	(Rocky Mt. Form)	90		dry		spring	537
PINUS PONDEROSA SCOPULORUM (See P. ponderosa)										
PINUS PUNGENS (Mountain pine)	1		40,542			75				
	15		40,540	fall		75	dry	90 days at 32°F.		
	19		35,700							
	72	3	35,700	early fall	80	54				
PINUS RADIATA (Monterey pine)	1		20,000							
	46						dry	stratify 60 days at 32-50°F.		
	51		23,800			48				
	54		23,200							
PINUS RESINOSA (Norway pine)	1	2	52,000			68				
	8		50,000							
	15		38,210	[illegible]		69	dry	90 days at 32°F.		
	20				98		dry		May	
	31						36°F. dry, tight carboys			
	41						sealed dry at 5-41°F. OK 1 or 2 yrs. only			
	43				76	65	30 days at 43°F.			
	46						dry, sealed	stratify 30-60 days at 32-50°F.		
	52		63,216							13,800
	72	1	49,620	early fall	99	85	cold, dry, sealed			10,423

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plant Lb. Seed
PINUS RIGIDA (Pitch pine)	1	2	62,454			70				
	8		64,363							
	19		64,700							
	43				85	62		30 days at 43°F.		
	46						sealed, dry	stratify 30 days at 32-50°F.		
	52									
	72	3	60,500	fall	90	44				10,300
PINUS RIGIDA SEROTINA (See P. serotina)										
PINUS SEROTINA (Pond pine)	1		56,000			80				
PINUS SONDEREGGERI (Sondereggeri pine)	1		13,400							
PINUS STROBIFORMIS (Mexican white pine)	1		2,700							
PINUS STROBUS (Northern white pine)	1	2	25,076			67				
	7					72				
	8		25,409							
	12		22,800	Oct.		60			early spring	
	15	2	25,070	Sept.	92	67	dry, cold	90 days at 32°F.		5,380
	20				96		dry			
	31						36°F. dry, tight carboys		May	
	43				87	74		30 days at 43°F.		
	46						dry, sealed	30-60 days at 32-50°F.		
	52		20,480							5,380
PINUS SYLVESTRIS (Scotch pine)	1		70,800			55				
	7					90				
	8		77,190							
	12		71,000	Oct.		55			early spring	

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usuable Plants Lb. Seed
PINUS SYLVESTRIS (Scotch pine) (Continued)	15		70,460	Oct.		55	dry	90 days at 32°F.		
	19		64,500							
	20		81,270							
	22		77,480							
	43					63		30 days 43°F.		
	46						dry, sealed	stratify 60-90 days at 32-50°F.		
	52		100,800							11,200
	54		28,000			23				
	65		75,000			75				15,000
	72	2	75,536	fall	97	85	cold, dry, sealed			21,973
	77		77,250		99	65	dry			12,220
PINUS TAEDA (Loblolly pine)	1	3	24,000			41				
	12		15,700	Oct.		40			early spring	
	15	2	24,050	Oct.		41	dry	90 days at 32°F.		
	32			Oct. or Nov.			dry	stratify 30 days at 35°F.	fall or early spring	5,000
	33				82					
	37		22,227							
	41						sealed, dry 5-41°F. OK 1 or 2 yrs. only			
	43				20			30 days at 43°F.		
	46						sealed, dry	stratify 60 days at 32-50°F.		
	58				62	44				
	66					73	dry, sealed 30-40°F. 6 yrs. OK			
	69							stratify 60-90 days at 32-40°F.		
	73	1	15,870	fall	90	51	dry, cool	stratify 60 days	spring	2,500

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
PINUS THUNBERGI (Japanese black pine)	1		48,000							
	46						dry, sealed	stratify 30-60 days at 32-50°F.		
	51		40,380			84				
	54		84,400			72				
PINUS TORREYANA (Torrey pine)	51		657		26	4				
PINUS TUBERCULATA (See P. attenuata)										
PINUS VIRGINIANA (Virginia pine)	1		62,142							
	12		62,000						early spring	
	15		62,140	Oct.			dry	90 days at 32°F.		
	19		40,500							
	72	3	50,800	fall	90	60				
PIPTADENIA OUDHENSIS	54		14,080	Apr.-May						13,800
PISTACIA CHINENSIS (Chinese pistache)	60		7,000	Aug.-Sept.		65		fresh seed none; stored seed hot H_2O and stratify		
PISTACIA INTEGERRIMA	54		8,640	June-Aug.		5				
PISUM SATIVUM ARVENSE (Austrian winter field pea)	62		4,800							
PITHECOLLOBIUM SAMAN	54		2,250	Apr.						
PLANTAGO	26			winter			dry	none	spring	
	75			June		24	dry	none	fall or winter	
PLANTAGO MAJOR	71		2,270,000							
PLANTAGO PURSHII	71		605,333							

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
PLANTAGO RUGELII	71		648,571							
PLATANUS (Planetree)	47							stratify	fall or spring	
	50							none	spring	
PLATANUS OCCIDENTALIS (Sycamore)	1		170,000			30				
	3		100,000	fall			dry	stratify 60 days at 41°F.	spring	
	8		32,136							
	15	34								
	19	90								
	25					67				
	26						dry		spring	
PLATANUS ORIENTALIS (European planetree)	1		168,000							
	7				75					
	8		112,727							
	12			Sept.		30		stratify		
PLATANUS RACEMOSA (California sycamore)	60		219,000	summer		12		stratify		
PLATANUS WRIGHTI (Arizona sycamore)	17					0				
PODOCARPUS NERIFOLIA	54		352	Jan.-Mar.		40				130
POECILONEURON PAUCIFLORUM	54		240			8				
POGOSTEMON PLEDTRANTHOIDES	54		25,600							
POLANISIA GRAVEOLENS (Clammy-weed)	71		148,852							

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
POLIOMINTHA INCANA	17					0				
	75			summer-fall			dry	none	spring	
POLYANTHIA LONGIFOLIA	54		270	Aug.-Oct.		60				160
POLYANTHIA SIMIARUM	54		192	Jan.-July		73				110
POLYGONUM AVICULARE	71		672,592							
POLYGONUM CONVOLVULUS	71		64,857							
POLYGONUM ERECTUM	71		213,647							
POLYGONUM HYDROPIPER	71		275,151							
POLYGONUM LAPATHIFOLIUM	71		292,903							
POLYGONUM PARONYCHIA	22		89,600							
	72		80,177	summer-fall		35	dry		late fall	
POLYGONUM PENSYLVANICUM	71		126,111							
POLYGONUM PERSICARIA	71		255,775							
POLYGONUM RAMOSISSIMUM	71		109,397							
POLYGONUM VIRGINIANUM	71		85,660							
PONGAMIA GLABRA	54		672	Jan.-June		73				
PONTEDERIA CORDATA (Pickerel-weed)	20				57			stratify	May	
POPULUS (Poplar)	26			spring			must not dry	stratify	soon as ripe	
	47							stratify	fall or spring	
	50								soon as ripe	

Name	Rec. No.	Lb.Seed 100 lb. Fruit	No.Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb.Seed
POPULUS DELTOIDES (Eastern cottonwood)	1		1,350,000							
POPULUS EUPHRATICA	54		16,640 (fruit)	Apr.-Aug.						
PORTULACA (Portulaca)	26			summer-fall			dry	none	spring	
PORTULACA OLERACEA	71		3,492,307							
POTAMOGETON AMERICANUS (Pond weed)	6			Sept.		58		210 days at 35°F. in H_2O		
POTENTILLA GLANDULOSA	60		1,438,000	July-Sept.				fresh seed none; stratify stored seed		
POTENTILLA MILLEGRANA	71		11,350,000							
POTENTILLA MONSPELIENSIS	71		3,492,307							
POTENTILLA PARADOXA	71		3,783,333							
POTENTILLA RECTA	71		2,270,000							
PRIMULA DENTICULATA	78					50	dry		fall	
PRIMULA OBCONICA	78					40	dry		fall in light	
PRIMULA PULVERULENTA	78					40	dry		fall	
PROSOPIS GLANDULOSA (Honey mesquite)	13 54		192 (fruit)	May		88 60				
PROSOPIS JULIFLORA (Mesquite)	17 54		10,080	May-June		56 63				6,460

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
PROSOPIS PUBESCENS	14					98		60 min. H_2SO_4		
	17					24				
PROSOPIS SLICIGERA	54		12,080	June-Aug.		46				
PROTIUM SERRATUM	54		1,760							
PRUNELLA VULGARIS	71		756,666 (nutlets)							
PRUNUS AMERICANA (Wild plum)	2		1,300							
	3	22	1,150	summer				stratify	fall	
	12	20	600	summer				stratify	fall	324
	15	34	1,000	summer				stratify	fall	400
	19	12	832							
	20		1,088		98			stratify 100 days	fall or stratify	
	26							stratify	fall or spring	
	32						clean	stratify	soon as ripe	
	37	8								
	46						clean, dry	stratify 150 days at 32-50°F. or less time if pericarps removed		
	58	16								
	59				84					
	72	9	1,097	late summer	95		peat			113 231
	73	33	600	summer	87		dry		fall	
	74	9	725	summer-fall	76		dry	stratify Sept.-Mar.	fall or stratify	113
	75	7		summer	92		dry	stratify 180 days		135
	76	12	950	summer	72	43	cellar	stratify Nov.-Mar.	fall or spring	

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
RUNUS ANGUSTIFOLIA	3	22	770	summer				stratify	fall	
(Chickasaw plum)	12	20	900	July	96			stratify	fall	
	37		1,031							
	58	8								
	59				91	70				152
	74	10	1,322	summer	51		dry	stratify Sept.-Mar.	fall or stratify	152
RUNUS ARMENIACA	3		250	June-			dry	stratify 25 days	fall or	
(Apricot)	7			July	92				spring	
RUNUS AVIUM	8		2,590							
(Bird cherry)	29		2,200							
	34				95	70		stratify	immediately	
	46						clean, dry	stratify 90 days at 32-50°F.		
	50							stratify	soon as ripe or stratify	
RUNUS BESSEYI	74	19	2,264	July	97		dry	stratify Nov.-Mar.	fall or stratify	
	75	15		summer	95		dry	stratify	fall	1,453
	76	28	1,500	July	89	72	cellar	stratify Nov.-Mar.	fall or spring	
RUNUS CERASIFERA	29		1,025							
(Myrobalan plum)	34			summer	62	30		stratify	immediately	
RUNUS CERASOIDES	54		1,504							
RUNUS DEMISSA	21		3,900							
(Western chokecherry)	22		3,040							
	60		1,600	summer		12		stratify 60 days		
	77	25	3,790	summer-fall	92		dry	stratify	spring	174

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
PRUNUS DEMISSA MELANOCARPA (Black western choke-cherry)	28				96					
PRUNUS DIVARICATA	7				96					
PRUNUS EMARGINATA (Bitter cherry)	22		4,120							
	60		1,800	summer		5		stratify 90 days		
	77	25	5,471	summer	92		dry	stratify	spring	
PRUNUS GRAVESI	53		2,300	late summer	99					
PRUNUS HORTULANA (Wild goose plum)	72		1,300		90					
PRUNUS ILICIFOLIA (Hollyleaf cherry)	21		240							
	60		200	early fall		24		fresh seed none; stored seed stratify 90 days		
PRUNUS INSITITIA (Plum)	77	7	625	summer			dry	stratify	spring	
PRUNUS MAHALEB (Mahaleb cherry)	8		4,681							
	29		6,000							
	34				99	70		stratify	immediately	
	46						clean, dry	stratify 90 days at 32-50°F.		
PRUNUS MARITIMA (Beach plum)	53		2,515							
	72	11	2,500	late summer	90					
PRUNUS MELANOCARPA (See P. demissa melanocarpa)										
PRUNUS MUNSONIANA	46						clean, dry	stratify 90 days at 32-50°F.		
(Wildgoose plum)	53		900	late summer	99					

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
PRUNUS NEPAULENSIS	54		576	Oct.-Nov.		85				
PRUNUS PADUS	7				99					
(European birdcherry)	54		1,504							
PRUNUS PENNSYLVANICA	20				84			stratify	Nov. or Apr.	
(Pin cherry)	72	16	21,760	summer	97					
PRUNUS PUDDUM (See P. cerasoides)										
PRUNUS PUMILA	18		2,460							
(Sand cherry)										
PRUNUS SEROTINA	1		4,620			77				
(Wild black cherry)	2		4,500							
	12	40	4,000	Aug.		77		stratify	fall	
	15	40			77					
	19	20	4,990							
	20		4,566							
	26							stratify	fall or spring	
	33				96			stratify 60-160 days	fall or stratify	
	37	39	6,358							
	58	21			55					
	59				80					12
	67					70		remove pulp; mulch beds	early fall or stratify	
	72	26	4,990	late summer						
	73	40	4,000	summer	85		dry	none	immediately	
	74	39	7,021	summer	61		dry	stratify Sept.-Mar.	fall or stratify	

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
PRUNUS SIMONI (Apricot plum)	46						clean, dry	stratify 45 days, 32-50°F. or 25 days if carpels are removed		
PRUNUS SPINOSA (Blackthorn)	7				99					
PRUNUS SUBCORDATA (Pacific plum)	60		450	Aug.-Sept.		100		stratify 90 days		
PRUNUS TOMENTOSA	46						clean, dry	stratify 75 days at 32-50°F. or 42 days if carpels are removed		
	53		6,400							
	72	7	5,690	July	99					
PRUNUS VIRGINIANA (Chokecherry)	2		6,500							
	3	20	5,000	summer				stratify	fall	
			1200 (fruits)							
	18		5,700							
	19	14								
	20				82				Nov. or Apr.	
	37	24	3,012							
	59				90					110
	72	13	8,400	summer	98		sand and peat	stratify 100 days at 41°F.	spring	1,175
	74	20	3,320	summer	92		dry	stratify Nov.-Mar.	fall or stratify	110
	76		4,500	summer	93	84	cellar	stratify Nov.-Mar.	fall or spring	
PRUNUS WATSONII (See P. angustifolia)										
PSUEDOLARIX KAEMPFERI (Goldenlarch)	8		10,000							
	47						dry	none	spring	
PSUEDOTSUGA DOUGLASI (See P. taxifolia)										

Name	Rep. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
PSEUDOTSUGA TAXIFOLIA (Douglas fir)	1	2	43,422			50				
	8		42,300							
	15		40,000	fall		48	dry			
	17					86				
	18		34,300		98					
	22		37,300	(Rocky Mountain Form)						
	22		44,800	(Pacific Coast Form)						
	35						dry	none		
	43					35				
	46						dry, sealed	stratify 60-75 days at 41-50°F.		
	54		46,000			25				
	65		42,000			60				10,000
	75		32,000	Sept.	85		dry	none	spring	11,600
	76	2	35,000	late summer	98	92	dry	none	late spring	
	77	1	41,050	fall	74		dry		spring	6,617
PTELEA ANGUSTIFOLIA (Hoptree)	9		7,246			98				
PTELEA TRIFOLIATA	18		18,350		88					
	37		11,884							
	47							stratify	fall or spring	
	50							stratify	fall or spring	
	72		6,000 (fruit)	late summer	99					
PTEROCARPUS DALBERGIOIDES (See P. indicus)										
PTEROCARPUS INDICUS	54		1088 (fruit)	Jan.-Apr.		31				
PTEROCARPUS MACROCARPUS	54		976 (fruit)	Dec.-Feb.						
PTEROCARPUS MARSUPIUM	54		880 (fruit)	Feb.-May		89				790 (fruit)

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
PTEROCARPUS SANTALINUS	54		560 (fruit)	Feb.-Apr.		58				140 (fruit)
PTEROCARYA CAUCASIA	54		6,400			5				
PTEROCARYA FRAXINIFOLIA (Caucasian wingnut)	7				92					
PTEROSPERMUM ACERIFOLIUM	54		1,920	Apr.						88
PTERYGOTA ALATA (See Sterculia alata)										
PUERARIA THUNBERGIANA (Kudzu	32						dry	scarify	June	2,000
	58					67				
	72	30	40,800	late fall	80	26	dry	scarify	late spring	2,732
	73		42,637	late fall		82	dry	H_2SO_4 45 min. or scarify		
PURSHIA TRIDENTATA (Bitterbrush)	22 (1935)		22,680							
	60		18,000	July-Sept. early summer		69		stratify 90 days		
	77				66		dry	stratify	spring	
PUTRANJIVA ROXBURGHI (India amuletplant)	54		720 (fruit)	Feb.-Mar.						
PYRACANTHA (Fire thorn)	26							stratify	fall or spring	
PYRACANTHA COCCINEA (Scarlet firethorn)	46						dry, clean	stratify 90 days at 32-50°F.		
PYGEUM WIGHTIANUM	54		260			80				
PYRUS CALLERYANA (Callery pear)	26						dry		spring	
	29		25,300							

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
PYRUS COMMUNIS (French pear)	7				92					
	8		15,181							
	26							stratify	fall or spring	
	29		12,500							
	46						dry, clean	stratify 90 days at 41-50°F.		
PYRUS PASHIA (Pashi pear)	54		42,000	Dec.-Feb.		78				
PYRUS SEROTINA (Japanese late pear)	46						dry, clean	stratify 100 days at 41-50°F.		
PYRUS USSURIENSES (Ussurian pear)	26						dry		spring	
	46						dry, clean	stratify 50 days at 41-50°F.		
QUERCUS (Oak)	26								immediately	
	32						keep moist	stratify	fall or stratify	
QUERCUS AGRIFOLIA (Coast live oak)	60		200	fall		73				
QUERCUS ALBA (White oak)	1		154			81				
	19	60	210							
	32								must be fall planted	
	46						moist, 32-45°F.			
	72	90	170	fall	70			mulch	soon as ripe	41
	73	75	130	fall		70		none	immediately	20

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
QUERCUS BICOLOR	1		91			78				
(Swamp white oak)	46						moist, 32-45°F.			
QUERCUS BOREALIS	1		95			82				
(Northern red oak)	19	74	160							
	20		105							
	72	80	114	fall	77				fall	32
QUERCUS CERRIS	1		60			76				
(European turkeyoak)										
QUERCUS CHRYSOLEPIS	60		150	fall		56				
(Canyon live oak)										
QUERCUS COCCINEA	1		280			75				
(Scarlet oak)										
QUERCUS DILATATA	54			Sept.-Oct.		93				
QUERCUS DOUGLASI	60		180	Aug.-Oct.		72				
(California blue oak)										
QUERCUS DUMOSA	60		100	June-Sept.		80				
(California scrub oak)										
QUERCUS DURATA	60		100	Aug.-Sept.		50				
(Leather oak)										
QUERCUS FENESTRATA	54		190	Nov.-Dec.						
QUERCUS GARRYANA	77							stratify	spring	14
(Oregon white oak)										
QUERCUS GLAUCA	54		275	Nov.-Dec.		53				
(Blue Japanese oak)										
QUERCUS GRIFFITHI	54		330			94				

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
QUERCUS IMBRICARIA (Shingle oak)	1		625							
QUERCUS INCANA	54		280	Dec.-Feb.		95				43
QUERCUS KELLOGGI (California black oak)	60		115	Sept.-Oct.		95				
QUERCUS LAMELLOSA	54			Nov.-Dec.		80				54
QUERCUS LAURIFOLIA (Laurel oak)	1		615							
QUERCUS LINEATA	54			Nov.-Dec.						40
QUERCUS LOBATA (Valley white oak)	60		75	Sept.-Oct.		24				
QUERCUS LYRATA (Overcup oak)	1		144			84				
QUERCUS MACROCARPA (Bur oak)	3		68	Aug.-Sept.				stratify	fall	
	19	75								
	20							dry, or stratify 30-160 days	fall, winter, spring	
	37	63								
	46						moist, 32-45°F.			
	76	70	440	Aug.	70	52	cellar	stratify Oct.-Mar.	fall or spring	
QUERCUS MONGOLICA (Mongolian oak)	8		129							
QUERCUS MONTANA (Chestnut oak)	1		92			82				
	73		60	fall					immediately	

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
QUERCUS MUEHLENBERGI	1		520							
(Chinquapin oak)	54		290							
QUERCUS NIGRA	1		520							
(Water oak)										
QUERCUS PACHYPHYLLA	54			Nov.-Dec.						10
QUERCUS PALUSTRIS	1		384			68				
(Pin oak)	19	65								
QUERCUS PHELLOS	1		597							
(Willow oak)										
QUERCUS PONTICA	54		288							
QUERCUS PRINUS	1		70			87				
(Swamp chestnut oak)	15		195		50					
	19	40								
QUERCUS ROBUR	1		109			98				
(English oak)	8		136							
QUERCUS RUBRA	1		700			52				
(Southern red oak)	12	100	685	Oct.	52					
	46					85	33-38°F.			
	73	75	160	fall		70	cold, moist	none	fall or spring	10
	19	86								
QUERCUS SEMECARPIFOLIA	54		64	June-Aug.						
QUERCUS SEMISERRATA	54		65							
QUERCUS SERRATA	54		170	Sept.-Jan.		78				
(Bristletooth oak)										
QUERCUS SPICATA	54		256	Sept.-Oct.						

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds Per Pound		Cutt. Test %	Germ. Test %	Type of Storage	Type Treatment	Time to Plant	Usable Plants Lb. Seed
QUERCUS STELLATA	1		508			62				
	3		239	Aug.-Sept.				stratify	fall	
	12	100	400	Nov.	62				immediately	
QUERCUS VELUTINA (Black oak)	1		218			76				
	19	40	400							
	20		284							
	46						85% humidity at 33-38°F.			
	72		180	fall	90					
QUERCUS VIRGINIANA (Live oak)	1		335							
QUERCUS WISLIZENI (Highland live oak)	60		100	Sept.-Oct.		40				

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
)IA PYRENAICA	78					60	dry		fall	
US SATIVUS ld radish)	60		54,000	July-Nov.		96		none		
D. COLUMBARIS	71		1,031,818							
'S ckthorn)	47							stratify	fall or spring	
	50							stratify	fall or strat-ify	
IS CALIFORNICA ifornia buckthorn)	60		2,000 dry fruits each containing 2 seeds			30		fresh seed none; stratify stored seed		
S CATHARTICA kthorn)	7				98					
	11		23,381		76					
S COLCHICA	15		25,980							
'S CROCEA lylcaf buckthorn)	60		70,000	June-Sept.		60		none		
S CROCEA VAR. ICIFOLIA lylcaf buckthorn)	60		71,000	June-Sept.		73		fresh seed none; stratify stored seed		
S DAHURICA urian buckthorn)	3	22	24,000	Aug.-Sept.			dry	60-90 days at 41°F.	fall or spring	
	18		39,567							
S DAHURICA IPPONICA	72						sand and peat	alternating temper-ature over winter	spring	15,000
S GRANGULA ssy buckthorn)	53	9	19,600	summer	99					

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
RHAMNUS PURSHIANA (Cascara buckthorn)	1		4,735							
	22		13,650							
	60		2,000	Sept.-Oct.		40		stratify 90 days		
	77	20	13,035	summer	90		dry	stratify	spring	
RHAMNUS RUBRA	60		3,000 dry fruits each containing 2 seeds			16		fresh seed none; stratify stored seed		
RHODODENDRON ARBOREUM (Tree rhododendron)	54		528,000	Jan.-Mar.						
RHODODENDRON CALIFORNICUM (Coast rhododendron)	60		2,000,000	Aug.-Sept.		90		germinate in peat		
RHODODENDRON OCCIDENTALE (Western azalea)	60		4,000,000	July-Sept.		75		germinate in peat		
RHODOTYPOS KERRIOIDES (Jetbead)	46						dry	stratify 86°F. 30 days then 41°F. for 90 days		
RHUS (Sumac)	47							stratify	soon as ripe, or spring	
	50							stratify	fall or stratify	
RHUS AROMATICA	58				94					
RHUS CISMONTANA	9		61,335		30					
	17					2				
	75	30		Sept.	18		dry		winter	50

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cut Test %	Germ Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
RHUS COPALLINA (Montana sumac)	12		70,000	Nov.-Dec.	60			stratify		
	15		36,589 or 22,870 (uncleaned)		76					
	16		41,051		44	2				
	33				90					
	58	34								
	73	27	78,600	fall	75	low	dry	scarify	immediately or spring	633
RHUS CORIARIA	8		36,363							
RHUS COTINUS (Common smoketree)	54		64,800	June						
RHUS GLABRA (Smooth sumac)	2		22,090	Sept.			dry	20 min. H_2SO_4 then dry storage 1 mo. stratify		155
	12	10	31,000	Nov.-Dec.	90					
	16		32,432		55	2				
	18		26,900 (with seed coat)		96					
	20								second fall	
	33				80					
	37		28,817							
	58	50								
	72		22,660	summer						
	76	55					dry	none	spring	178
RHUS GLABRA OCCIDENTALIS	22		31,720							
	77		30,210	late summer	67		dry	crack	spring	
RHUS HIRTA (See R. typhina)										

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
RHUS INTEGRIFOLIA	21		6,800							
(Mahogany sumac)	60		8,000 (seeds)	July-Oct.		84		H_2SO_4 4 hrs.		
			3,000 (dry fruits)							
RHUS LAURINIA	21		129,600							
(Laurel sumac)	60		90,000	Aug.-Sept.		32		hot H_2O		
RHUS MICROPHYLLA	17					16				
	75			summer			dry	none	spring	
RHUS MONTANA	18		83,350							
RHUS OCCIDENTALIS (See R. glabra occidentalis)										
RHUS OVATA	21		18,700							
(Sugar sumac)	60		26,000 seeds or 17,000 dry fruits	Sept.-Nov.		39		H_2SO_4 1-6 hrs.		
RHUS PARVIFLORA	54		41,600	June-Apr.						
RHUS TRILOBATA	3	50	10,500	Aug.-Nov.				stratify 120 days 41°F. or H_2SO_4 20 min.	fall or spring	
(Lemonade sumac)			6,900 (berries)							
	9		17,855							
	14					38				
	17					16				
	18		24,950		85					
	21		11,800							
	28				26					
	35					35		H_2SO_4 ½ hr.		
	37		29,333							
	75	20		summer	37		dry		winter	2,450
	76		30,000	Sept.	62		dry	stratify Nov.-Mar.	fall or spring	
	77		22,700	summer			dry	stratify	spring	1,100

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
RHUS TYPHINA (Staghorn sumac)	2		22,090	Sept.			dry	H_2SO_4 20 min. then dry storage 50°F. 30 days		
	12	10	50,000	Nov.-Dec.				stratify		
	72		28,120	throughout fall			dry	mulch	fall	1,800
RIBES SP. (Currant)	47						dry	none	spring	
	50							stratify	fall or spring after stratification	
RIBES SP. (Gooseberry)	50							stratify	soon as ripe, or in spring after stratification	
RIBES AMERICANUM (American black currant)	46					74	clean, dry	stratify 200 days at 41-45°F.		
RIBES AUREUM (Slender golden currant)	3	4	200,000	summer			dry	90 days at 41°F.	fall or spring	
	77		231,086	summer						
RIBES CYNOSBATI (Pasture gooseberry)	46						clean, dry	stratify 120 days at 34-38°F.		
RICINUS COMMUNIS (Common castor-bean)	54		2,080	Feb.		67				
	60		800	Aug.-Nov.		78		none		
ROBINIA KELSEYI (Kelsey locust)	15		80,640							
	72		83,200	throughout fall	65					

Name	Ref. No.	Lb. Seed 100 lb Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
ROBINIA NEOMEXICANA	9		21,807		97					
(New Mexico locust)	13					10				
	17					26				
	35					50		H_2SO_4 15 min.		
	75	19	21,440	fall	96		dry	H_2SO_4	spring	1,250
ROBINIA PSEUDOACACIA	1		26,000			87				
(Black locust)	3	30	26,000	late fall			dry	H_2SO_4 20 min or scarify		
	7				75					
	9				94					
	12		22,000	Nov.		87	dry	scarify		
	15	33	15,760		98					
	16		20,185		99	43				
	17					56				
	18		32,732		86					
	32						dry	scarify	late spring	1,000
	35					60		H_2SO_4 45 min.		
	37	3								
	58				49					
	59				92	80				
	60		20,000	Aug.		80				
	61				69			shake 20 min.		
	72	33	24,000	throughout fall	96	52	dry			641
	73	31	25,000	early fall	82	49	dry	scarify	spring	1,322
	74	17	20,050	fall-winter	97	60	dry	H_2SO_4 or none	spring	1,092
	75				98		dry	H_2SO_4	spring	2,251
	76	6					dry	hot H_2O	fall or spring	493
	77	25	22,930	fall	97	86	dry	scarify	spring	1,616
ROMNEYA COULTERI	60		600,000	July-Sept.		20		stratify 90 days		
(Matilija poppy)										

Name	Ref. No.	Lb.Seed 100 lb. Fruit	No.Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb.Seed
ROSA	19	14								
(Rose)	20				85				Apr.	
	53	27								
ROSA ARKANSANA	18		53,000							
(Arkansas rose)	37		46,924							
ROSA CALIFORNICA (California wild rose)	60		102,000	Aug.-Nov.		62		stratify 90 days		
ROSA CANINA	7				87					
(Dogbrier)	8		23,590							
	46						clean, dry	stratify 270 days at 41-50°F.		
ROSA GYMNOCARPA (Wood rose)	60		28,000	Sept.-Oct.	43			stratify 90 days		
ROSA HELENAE (Helen rose)	46						clean, dry	stratify 210 days at 32-50°F.		
ROSA HUGONIS (Hugonis rose)	46						clean, dry	stratify 90 days at 41°F.		
ROSA HUMILIS (Pasture rose)	46						clean, dry	stratify 90 days at 37-50°F.		
ROSA LAEVIGATA (Cherokee rose)	3			fall				stratify	spring	
ROSA MULTIFLORA	26		50,000					stratify 60 days	early spring	
(Japanese rose)	72		81,536							
	58				77					
ROSA NUTKANIA	22		53,146							
(Nutka rose)	60		30,000	Sept.		50		stratify 90 days		
	77	15	49,180	fall	36		dry	stratify 150 days at 40°F.	spring	1,573

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
ROSA PISOCARPA	22		71,520							
	77	15		fall	73		dry	stratify 150 days at 40°F.	spring	4,880
ROSA PRATINCOLA	71		24,540							
ROSA RUBRIFOLIA (Redleaf rose)	46						clean, dry	stratify 1 yr. at 32-50°F.		
ROSA RUGOSA (Rugosa rose)	46						clean, dry; up to 3 yrs. or more OK	stratify 84 days at 32-50°F.		
	72		52,000	throughout fall						2,610
ROSA SETIGERA (Prairie rose)	46						clean, dry	stratify 100 days at 32-50°F.	immediately	
	72						peat	stratify 2 yrs.	spring	7,000
ROSA WOODSI FENDLERI (Fendleri rose)	46						clean, dry	stratify 300 days at 32-50°F.		
ROSA SP. (Siberian rose)	18		61,550		98					
RUBUS										
(Raspberry)	20				85			stratify	Apr.	
(Youngberry)	23	3	118,941							
(Loganberry)	23	3	177,948							
(Raspberry)	23	4	316,851							
(Brainard)	23	4	173,328							
(Blackberry, dewberry, raspberry)	37		151,503							
(Blackberry, dewberry, purplecane and red raspberry)	46						clean, dry	stratify		
(Blackberry)	50							stratify	soon as ripe or stratify	

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
RUBUS ALLEGHENIENSIS	53		328,860		84					
	72	4	284,000	summer	70					
RUBUS CANADENSIS (Thornless blackberry)	37	4								
RUBUS CHAMAEMORUS (Cloudberry)	46						clean, dry	stratify 180 days at 35-50°F.		
RUBUS IDAEUS (European raspberry)	46						clean, dry	H_2SO_4 2 hrs.		
RUBUS LEUCODERMIS	23		422,168							
RUBUS OCCIDENTALIS (Common blackcap)	37	8								
	72	3	384,000	summer	99					
RUBUS PARVIFOLIUS (Japanese trailing raspberry)	72			Aug.				mulch	soon as ripe	33,000
RUBUS STRIGOSUS (Red raspberry)	72	3	384,000	summer	99					
RUBUS THYRSANTHUS (Himalaya berry)	23	4	146,897							
RUBUS URSINUS	23		327,537							
RUDBECKIA HIRTA	71		1,746,153							
RUDBECKIA LACINIATA	71		252,222							
RUMEX ACETOSELLA	71		864,762							
RUMEX CRISPUS (Curly dock, yellow dock)	13					77				
	71		324,285							

Name	Ref. No.	Lb.Seed 100 lb. Fruit	No.Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb.Seed
RUMEX MEXICANUS	71	422,325								
RUMEX OCCIDENTALIS	71	567,500								
RUMEX PERSICARIOIDES	71	3,026,666								

Name	Ref. No.	Lb.Seed 100 lb. Fruit	No.Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb.Seed
SACCOPETALUM LONGIFLORUM	54		192	Aug.-Sept.		68				
SACCOPETALUM TOMENTOSUM	54		1,040			48				
SAGERAEA ELLIPTICA (See Bocagea elliptica)										
SAGERITIA WRIGHTI	17					36				
SAGITTARIA LATIFOLIA (Arrowhead)	6			Sept.		46		H_2O at 35°F. 150 days		
SALIX (Willow)	2								immediately	
	47								soon as ripe	
	50								soon as ripe	
SALSOLA TRAGUS	71		271,045							
SALVIA APIANA (White sage)	60		341,000	June-July		71		none; do not soak		
SALVIA COLUMBARIAE (Chia)	60		1,000,000	May-Aug.		28		none; do not soak		
SALVIA LEUCOPHYLLA (Whiteleaf sage)	21		412,300							
	60		304,000	June-July		54		none; do not soak		
SALVIA MELLIFERA (Black sage)	60		467,000	June-July		36		none; do not soak		
SALVIA SONOMENSIS (Creeping sage)	60			Aug.		25		stratify 90 days		
SALVIA SPATHACEA	60		27,400	June		26		none		

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
SAMBUCUS CAERULEA (Blue elder)	22		117,000							
	77	6	126,088	late summer	63		dry	stratify	spring	1,050
SAMBUCUS CALLICARPA (Red elder)	77	10	261,533	summer	79		dry	stratify	spring	
SAMBUCUS CANADENSIS (Elder)	2			fall				stratify	fall or spring	
	3	13	175,000	July-Aug.				stratify 90 days	spring	
	12	10	202,000	Aug.	60		clean	stratify		
	15	12	468,220							
	19	8	203,666							
	20		323,754		20				Nov.	
	37	8								
	46						clean, moist	stratify 85-100 days at 31-41°F.		
	48						clean, dry	stratify 10 days at 32-40°F.		
	58					13				
	72	18	250,000	fall	99					3,932
	73	7	220,200	early fall	68	13	cool, moist	depulp	immediately or stratify	2,500
	74	7								
SAMBUCUS GLAUCA (See S. caerulea)										
SAMBUCUS NEOMEXICANA (See S. caerulea)										
SAMBUCUS NIGRA (European elder)	8		175,909							
SAMBUCUS PUBENS (Scarlet elder)	53	4	303,000	summer	99					

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
SAMBUCUS RACEMOSA	2			fall				stratify	fall or	
(Red elder)	8		52,727						spring	
SANICULA MARILANDICA	71		58,961 (mericarps)							
SANTALUM ALBUM (Sandalwood)	54		3,120	May-Dec.		41				1,200
SAPINDUS DETERGENS (See S. mukorossi)										
SAPINDUS DRUMMONDI	3	30	1,700	fall			dry	H_2SO_4 2 hrs.		
(Western soapberry)			(500 with pulp)							
	9		1,593		96					
	12	33	1,500		95		clean, dry			
	14					68		H SO 2 1/2 hrs.		
	17					12				
	32						dry	hot H_2O	spring	
	37	82	685							
	74	60								
	75		1,980	Oct.			dry	H_2SO_4	spring	182
SAPINDUS EMARGINATUS (See S. trifoliatus)										
SAPINDUS MUKOROSSI	54		365	May and Dec.-Jan.						
SAPINDUS TRIFOLIATUS	54		1,040	Feb.-Apr.						10
SAPIUM BACCATUM	54		17,600							
SAPIUM SEBIFERUM	12		3,600	fall	95		dry			
(Chinese tallowtree)	32						dry	hot H_2O	spring	
	54		3,840	Dec.-Feb.						11
SAPONARIA OFFICINALIS	71		330,181							
(Bouncing Bet)	72		142,600	throughout fall	99		dry	mulch	fall or spring	23,000

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
SARCOBATUS VERMICULATUS (Greasewood)	17					16				
SASSAFRAS VARIIFOLIUM (Sassafras)	2			late summer				stratify with flesh		
	47							stratify	soon as ripe or spring	
	50								soon as ripe	
SCHIMA WALLICHI	54		120,560	Feb.-Mar.		32				1,600
SCHINUS MOLLE (Peppertree)	17					46				
SCHLEICHERA TRIJUGA (See Cupania lessertiana)										
SCHREBERA SWIETENIOIDES	54		1,880	Feb.-Mar.		71				140 (fruit)
SCIADOPITYS VERTICILLATA (Umbrella pine)	8		17,090							
	26						dry	spring		
	46						clean, dry	stratify 100 days at 63-70°F.		
	51		19,500			4				
SCIRPUS AMERICANUS (Shore rush)	71		206,363							
SCIRPUS ATROVIRENS (Meadow rush)	71		6,485,714							
SCIRPUS NEVADENSIS	71		477,895							
SCIRPUS PALUDOSUS	71		139,692							
SCOPHULARIA LEPORELLA	71		3,242,857							

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
SCUTELLARIA LATERIFLORA	71		1,135,000 (nutlets)							
SEDUM INTEGRIFOLIUM	13					66				
SEMECARPUS ANARCARDIUM (Marking-nut tree)	54		400	Apr.-May		21				
SENECIO DOUGLASI (Creek senecio)	60			June-Oct.		93		none		
SEQUOIA GIGANTEA (See Sequia Washingtoniana)										
SEQUOIA SEMPERVIRENS (Redwood)	1		115,700			13				
	8		94,000							
	51					10				
	54		110.400			6				
SEQUOIA WASHINGTONIANA (Bigtree)	1		92,293			24				
	46						clean, dry, sealed	stratify 60 days at 41°F.		
	51		94,600			26				
	54		98,400			7				
SESBANIA (Sesbania)	62		40,000							
	64					99				
SESBANIA AEGYPTIACA	54		51,200	Oct.-Mar.		47				
SHEPHERDIA ARGENTEA (Silver-buffaloberry)	2		67,314	July-Aug.			dry	60 days at 41°F.	fall or spring	
	3	5	35,000	fall				stratify 90 days at 41°F.	fall or spring	
	9		43,700		98				second fall or second spring	10,000

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
SHEPHERDIA ARGENTEA	11		40,315		84					
(Silver buffalo-	12		43,000		98			stratify		
berry)	17					12				
(Continued)	18		57,424		95					
			9,150 (fruit)							
	20				50			stratify	Apr.	
	35					40		H_2SO_4 ½ hr.		
	37	10								
	47							stratify	soon as ripe, or spring	
	50						clean	stratify	spring	
	60		18,000	June-Aug.		78		none		
	75	8	60,200	summer	78		dry	none	early spring	
	76	7		late summer	94	63	dry	stratify Oct.-Mar.	fall or spring	
	77						dry	stratify	spring	775
SHOREA	54		360							
SHOREA ASSAMICA	54		220 (fruit)	Apr.		83				
SHOREA OBTUSA	54		1,450(fruit)	May						
SHOREA ROBUSTA	54		375(fruit)			80				160 (fruit)
SHOREA SIAMENSIS	54		730							
SHOREA SUAVIS (See S. siamensis)										
SHOREA TALURA	54		400(fruit)							
SHOREA THUMBUGGAIA	54		210(fruit)							
SIDERANTHUS SPINULOSUS	71		880,227							

Name	Ref. No.	Lb.Seed 100 lb. Fruit	No.Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb.Seed
SIDEROXYLON LONGEPETICLATUM	54		270							
SILENE ANTIRRHINA	71		4,540,000							
SILENE FABARIA	71		1,135,000							
SILENE NOCTIFLORA	71		534,117							
SIMMONDSIA CALIFORNICA (Pignut)	17					96				
SISYMBRIUM ALTISSIMUM	17		2,594,285							
SISYRINCHIUM ANGUSTIFOLIUM	71		756,666							
SISYRINGHIUM CALIFORNICUM	60		417,000	June		92				
SIUM CICUTAEFOLIUM	71		756,666 (mericarps)							
SKIMMIA JAPONICA (Japanese skimmia)	47 50						dry	none stratify	spring fall or	
SMILACINA RACEMOSA (False solomnseal)	49							stratify 90-120 days at 32-50 F.		
SMILAX HERBACEA (Japanese smilax)	15 72	37 37	8,128 19,200	fall	99		dry	mulch	fall	1,500
SOJA MAX (Soybeans)	62		1250 to 7775							
SOLANUM DULCAMARA (Bitter nightshade)	72	8		Sept.	85					1,178

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
SOLANUM ROSTRATUM	71		197,391							
SOLANUM TRIFLORUM	71		394,782							
SOLIDAGO RIGIDA	71		1,008,888							
SONCHUS ARVENSIS	71		1,194,736							
SONNERATIA ACIDA	54		30,400							
SONNERATIA APETALA	54		26,000	Aug.-Sept.						
SOPHIA HARTWEGIANA	71		5,675,000							
SOPHIA INTERMEDIA	71		3,492,307							
SOPHIA PARVIFLORA	71		3,783,333							
SOPHORA (Sophora)	47						dry	soak in hot H_2O	soon as ripe, or spring	
SOPHORA JAPONICA (Chinese scholartree)	7				65					
	8		4,136							
	12		4,080	fall	97		dry	scarify		
	17					48				
	19	17								
SORBARIA (False spirae)	50							stratify	soon as ripe, or stratify	

Name	Ref No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pounds	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
SORBUS AMERICANA (Mountain ash)	2		236,300	Aug.				stratify 60-120 days at 34°F.		
	18		83,500		98					
	19	1								
	20				54					
	72		160,640	fall	85					225
SORBUS ARIA (White beamtree)	8		1,045							
SORBUS AUCUPARIA (European mountain ash)	15	7	104,750	fall	99					2,090
	45						dry, cool; OK up to 2 yrs.	stratify 34-41°F. 60-120 days		
	46						clean, dry, room temperature	stratify 90 days at 32°F.	fall	
SORBUS SITCHENSIS (Western mountain ash)	22		144,400							
	60		66,400 seeds, or 6,210 dry fruits	Sept.		21		stratify 120 days at 32°F.		
	77	2	68,925	fall	81		dry	stratify 120 days at 40°F.	spring	2,073
SORGHASTRUM NUTANS (Indian grass)	64		196,010			57				
SORGHUM VULGARE										
Broomcorn	62		27,000							
Feterita	62		13,000							
Hegari	62		20,000							
Milo	62		15,000							

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
SORGHUM VULGARE (Continued)										
Sorghum	62		28,000							
Sorghum	63		24,960							
Sorghum	64					81				
SORGHUM VULGARE VAR. CAFFRORUM (Kafir)	62		20,000							
	63		22,730							
SORGHUM VULGARE VAR. SUDANENSE (Sudan grass)	62		55,000							
	63		54,400							
	64					76				
SOYMIDA FEBRIFUGA	54		4,720	May-Aug.		28				1,450
SPARTIUM JUNCEUM (Spanish broom)	60		30,000	July-Sept.		14		hot H_2O		
SPARTIUM SCOPARIUM (See Cytisus scoparius)										
SPHAERALCEA AMBIGUA	60		849,000	June		25		none		
SPIRAEA (Spiraea)	47							none	soon as ripe, or spring	
	50							stratify	soon as ripe, or stratify	
SPIRAEA DOUGLASI (Douglas spirea)	22		1,030,400							
SPIRAEA SALICIFOLIA	71		5,675,000							

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
SPONDIAS AXILLARIS	54		180	July-Aug.		3				
SPONDIAS MANGIFERA	54		130	Dec.-May						57
STACHYS PALUSTRIS	71		585,806 (nutlets)							
STAPHYLEA (Bladdernut)	47							stratify	soon as ripe, or spring	
	50							stratify	soon as ripe, or stratify	
STAPHYLEA BOLANDERI (Sierra bladder nut)	60		13,000	July-Aug.		16		H_2SO_4 1 hr.		
STAPHYLEA COLCHICA (Colchis bladdernut)	54		5,600							
STAPHYLEA PINNATA (European bladdernut)	15		12,550	fall			dry	mulch	fall	2,500
STAPHYLEA TRIFOLIA (American bladdernut)	19	94								
STENOTOPSIS LINEARIFOLIUS	60		233,000	May-July		24		none		
STEPHEGYNE DIVERSIFOLIA (See Mitragyna diversifolia)										
STEPHEGYNE PARVIFOLIA (See Mitragyna parvifolia)										
STERCULIA ALATA	54		568	Feb.-July		63				90

Name	Ref. No.	Lb.Seed 100 lb. Fruit	No.Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb.Seed
STERCULIA CAMPANULATA	54		2,240	May		24				
STERCULIA COLORATA	54		4,160							
STERCULIA FOETIDA	54		288							
STERCULIA FALLENS	54		2,880	May-June		85				
STERCULIA PLANTANIFOLIA (Japanese varnish tree)	12		2,250	Aug.	98		dry		fall or spring	
STERCULIA URENS	54		2,400		76					
STERCULIA VERSICOLOR	54		1,600			50				
STERCULIA VILLOSA	54		2,640	Apr.-May		72				
STEREOSPERMUM CHELENOIDES	54		13,760	Dec.		1				
STEREOSPERMUM SUAVEOLENS	54		12,400	Dec.-Apr.		28				1,300
STEREOSPERMUM XYLOCARPUM	54		3,520							
STEWARTIA (Stewartia)	47							soak, stratify	soon as ripe, or spring	
	50								soon as ripe	
STIZOLOBIUM DEERINGIANUM (Volvet bean)	62		960							

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
STROPHOSTYLES HELVOLA	61					79		H_2SO_4 ½ hr.		
	73			Sept.			dry		spring	
STRYCHNOS NUXVOMICA	54		336	Dec.-Feb.		31				
STYRAX (Snowbell)								stratify	fall or spring	
	50							stratify	soon as ripe	
STYRAX CALIFORNICA (California snowbell)	60		1,000; (500 dry fruits)	Aug.-Oct.		23				
STYRAX JAPONICA	46						clean, dry	stratify 90 days at 32-50°F.		
STYRAX OBASSIA (Fragrant snowbell)	46						clean, dry	stratify 90 days at 32-50°F.		
SWIETENIA MACROPHYLLA	54		992	Feb.-Apr.		32				280
SWIETENIA MAHOGONI (Mahogany)	54		1,600	Oct.-Dec.						
SYMPHORICARPOS ALBUS (Snowberry)	2			Aug.			moist or dry	75 min. H_2SO_4 then 180 days at 41°F.		
	15	20	72,520							
	18		95,650							
	19	3								
	20				73				Nov.	
	38					75		75 min. H_2SO_4, or 120 days stratfied at 77°F.; or H_2SO_4 + 3 wks. at 77°F.; then 180 days at 41°F.		
	46						clean	stratify 68°F. 90 days; then 41°F. 180 days or H_2SO_4		

	Lot No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
SYMPHORICARPOS ALBUS (Snowberry) (Continued)	60		54,000 (18,000 dry fruits)	Oct.-Nov.						
	72	3	71,600	fall	73					
	77	3	53,600	fall	89		dry	stratify	spring	
SYMPHORICARPOS MOLLIS (Spreading snowberry)	60		18,000 (dry fruits)	Sept.-Oct.						
SYMPHORICARPOS OCCIDENTALIS (Western snowberry)	3	7		fall				75 min. H_2SO_4, then 90-120 days at 41 F.		
	71		77,606							
	75		52,000		84		dry	stratify 270 days	summer or stratify	8,600
SYMPHORICARPOS ORBICULATUS	2			Aug.			dry or stratify	H_2SO_4 75 min., then 180 days at 50°F.	spring germination second year	
	3	7		fall				H_2SO_4 75 min., then 90-120 days at 41°F.		
	15 58	20	407,680							
	72	18		fall	96		dry	(Germination second year)	fall	2,600
	73			fall	80				immediately	
SYMPHORICARPOS OREOPHILUS (Mountain snowberry)	75	9		summer	50			dry		

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
SYMPHORICARPOS RACEMOSUS (See S. albus)										
SYMPHORICARPOS ROTENDIFOLIUS	60		16,000 (dry fruits)	Sept.-Oct.						
SYMPHORICARPOS VULGARIS (See S. orbiculatus)										
SYMPLOCOS TINCTORIA (Sweetleaf)	47							stratify	fall or spring	
	50							stratify 1 yr.		
SYRINGA VULGARIS (Common lilac)	7				47					
	19	20								
	36	7								
	37	2	33,718							
	47							stratify	spring	
	50							stratify	spring	
	59				55	50				800
	72	7	78,000	Sept.	90					827
	74	4	106,906	summer	80	53	dry	stratify Dec.-Mar.	Mar.	800
	77		80,812	fall			dry		spring	
SYRINGA VULGARIS ALBA (White lilac)	43				37	24		30 days at 60°F.		
SYZGIUM (See Eugenia)										

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
TALAUMA PHELLOCARPA	54		5,120	Sept.		4				
TAMARIX ARTICULATA	54		130,400	Dec.-Feb. and July						
TANACETUM CAMPHORATUM	60		1,000,000	June-Aug.		1		none		
TARAKTOGENOS KURZI	54		150	May-Dec.		32				
TAXODIUM DISTICHUM (Bald cypress)	1		2,981			65				
	8		4,545							
	12		3,000		65			stratify		
	37	49								
	46						clean, dry	stratify 30 days at 32-50°F.		
	73		4,200	fall	50		dry	stratify 30 days	spring	100
	74		7,303		17		dry	none	spring	
TAXUS (Yew)	22		98,000							
	26							stratify	fall or spring	
	47							stratify	winter or spring (under glass)	
	50							stratify 1 yr.	soon as ripe	
TAXUS CANADENSIS (Canada yew)	72		17,280	fall	99					
TECOMA RADICANS (See Bignonia radicans)										
TECOMA UNDULATA	54		42,160	May-Aug.		28				2,250

Name	Ref. No.	Lb.Seed 100 lb. Fruit	No.Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb.Seed
TECTONA GRANDIS (Teak tree)	54		9,875	Nov.-Mar.		37				375
TEINOSTACHYUM HELFERI	54			Feb.-Mar.						
TEPHROSIA CANDIDA	54		25,200	Nov.-Mar.		60				
TEPHROSIA PURPUREA	54		40,800			5				
TEPHROSIA TINCTORIA	54		26,400			10				
TEPHROSIA VOGELI	54		7,840							
TERMINALIA ARJUNA	54			Dec.-May		61				27(fruit)
TERMINALIA BELERICA	54		190	Feb.-Apr.		59				99
TERMINALIA CHEBULA	54		360	Nov.-May		60				180
TERMINALIA CITRINA	54		230(fruit)			39				
TERMINALIA CRENULATA (See T. tomentosa)										
TERMINALIA MYRIOCARPA	54		241,600 (fruit)	Dec.-Mar.		9				
TERMINALIA OLIVERI	54		2,400 (fruit)							
TERMINALIA PALLIDA	54		176 (fruit)							23(fruit)
TERMINALIA PANICULATA	54		19,520	Dec.-May		2				240
TERMINALIA PROCERA	54		352 (fruit)							

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
TERMINALIA TOMENTOSA	54		240(fruit)	Feb.-May		67				100 (fruit)
TETRADYMIA SPINOSA	60		120,000	June-Aug.		2				
TEUCRIUM CANADENSE	71		259,428 (nutlets)							
TEUCRIUM OCCIDENTALE	71		648,571 (nutlets)							
THALICTRUM DICICUM	71		181,600							
THELYPODIUM INTEGRIFOLIUM	71		1,418,750							
THESPESIA POPULNEA (Portiatree)	54		16,000							
THLASPI ARVENSE	71		578,343							
THUJA (Arborvitae)	50			fall				stratify	soon as ripe or stratify	
THUJA GIGANTEA (See T. plicata)										
THUJA OCCIDENTALIS (Northern white cedar)	1	5	325,075			44				
	2		444,321	fall first			dry			
	8		355,136	year						
	15	4	325,000	fall		44		stratify 60 days at 38°F.		3,456
	20				52			stratify		
	26			fall			dry	stratify 60 days		
	46						clean, dry	stratify 60 days at 32-50°F.		

Name	Ref. No.	Lb.Seed 100 lb. Fruit	No.Clean Seeds per Pound	Time to Collect	Cutt. Test	Germ. Test	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb.Seed
THUJA ORIENTALIS	1		25,000							
(Oriental arborvitae)	46						clean, dry	stratify 60 days at 32-50°F.		
	52		17,920							
	77	12	303,000	Sept.		37				
THUJA PLICATA	1	2	360,000			62				
(Western red cedar)	8		369,545							
	46						clean, dry	stratify 30-60 days at 32-50°F.		
	51				49					
	54		321,600							
	65		350,000			50				
	77	5	307,200	fall	69		dry		spring	
THUJOPSIS DOLABRATA	47						dry	none	spring	
(False arborvitae)	50							stratify	soon as ripe, or stratify	
TILIA AMERICANA (See T. glabra)										
TILIA GLABRA	1		6,000			71				
(Basswood)	12		3,500	fall	90					
	16		4,718		97					
	18		7,273		79					
	19	23	2,706	fall	87					
	20				85			stratify 1 yr.	Nov.	
	36							stratify 1 yr.		
	37	94								
	39							moist peat 68°F. 120 days or 20 min. H_2SO_4, followed by 90-150 days at 34-41°F.		

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
TILIA GLABRA (Basswood) (Continued)	42							air dry 120-150 days; remove pericarp with HNO_3, then 20 min. H_2SO_4, then stratify moist sterile peat at 35-41°F.; plant after germination		
	47							stratify 41°F. over winter	soon as ripe	
	50							stratify	soon as ripe, or stratify	
	73	90	6,000	fall	25	low	dry or moist peat	HNO_3 and H_2SO_4	spring	
	74	80		fall			dry	stratify Mar.-Nov.	second fall	
	76	83								
TORREYA (Torreya)	47							stratify	winter or spring (under glass)	
TORREYA CALIFORNICA (California nutmeg)	60		140	Sept-Nov.		92		stratify 90 days		
TOXYLON POMIFERUM (See Maclura pomifera)										
TRADESCANTIA OCCIDENTALIS	71		151,333							
TRAPA NATANS (Water chestnut)	6			Oct.		92		180 days H_2O at 35°F.		

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
TREMA ORIENTALIS	54		163,200			1				
TREWIA NUDIFLORA	54		1,952	July-Dec.		69				900
TRIFOLIUM AGRARIUM (Hop clover)	62		830,000							
TRIFOLIUM FRAGIFERUM	72		282,000	Aug.		90		none or scarify	spring	
TRIFOLIUM HYBRIDUM (Alsike clover)	62		700,000							
	63		680,320							
	64					87				
	72		700,000	Aug.		87		none or scarify	spring	
TRIFOLIUM INCARNATUM (Crimson clover)	62		150,000							
	63		149,600							
	72		125,000					none	spring	
TRIFOLIUM PRATENSE (Red clover)	62		250,000							
	63		272,160							
	72		250,000	Sept.		87			spring	
TRIFOLIUM REPENS (White clover)	62		700,000							
	63		680,320							
	64					85				
	72		700,000	Aug.		82		scarify	spring	
TRIFOLIUM RESUPINATUM (Strawberry clover)	62		330,000							
TRIFTERIS PACHYPTERIS	75			spring		30	dry	none	spring	
TRITICUM AESTIVUM (Wheat)	62		16,000							
	63		11,328							
TSUGA BRUNONIANA	54		187,760	Sept.-Dec.		88				10,400

Name	Ref. No.	Lb.Seed 100 lb. Fruit	No.Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb.Seed
TSUGA CANADENSIS (Eastern hemlock)	1	3	190,527			44				
	8		159,500							
	15	4		fall	52					816
	26			fall			dry	none	early spring	
	43					13		30 days at 43°F.		
TSUGA CAROLINIANA (Carolina hemlock)	43					18		none		
TSUGA HETEROPHYLLA (Western hemlock)	1	3	299,437							
	43					46		none		
TSUGA MERTENSIANA (Mountain hemlock)	1		154,955							
	51		302,600			46				
TURFINIA POMIFERA	54		4,000							
TYPHA LATIFOLIA (Cattail)	6			Aug.		65		210 days dry at room temperature		
ULEX (Gorse)	47						dry	none	spring	
	50								spring	
ULEX EUROPAEUS (Gorse)	8		67,272							
	51		66,500			58				
ULMUS ALATA (Winged elm)	37	42	85,640							
	74	43		spring			dry	none	spring	1,330
ULMUS AMERICANA (American elm)	1		94,600			71				
	3	50	95,000	spring			low temperature; humid air		first or second spring	
	12	100	53,000	Apr.		71			immediately	

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
ULMUS AMERICANA (American elm) (Continued)	16							dry 2 days	immediately	
	27							dry 32-50°F., humid air	immediately or second spring	
	32							dry or plant immediately		
	37	45	116,779							
	59				90	78				733
	68					80	23-41°F. OK to 16 mos. if dried to 7% H_2O and sealed	stratify 1 mo. at 41°F.		
	74	37	78,348	late spring	93	18	dry	none	spring	1,867
	76	100	56,000	late spring	85	80	dry	dewing	immediately	500
ULMUS CAMPESTRIS (English elm)	8		57,000							
ULMUS CRASSIFOLIA (Cedar elm)	37	25								
	64			fall					immediately	
ULMUS FULVA (Slippery elm)	1		54,000							
	2		54,000	May			50°F., humid air		immediately or second spring	
	16		35,221		95	9		dry 2 days		

Name	Ref. No.	Lb.Seed 100 lb. Fruit	No.Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb.Seed
ULMUS FULVA	36	24								
(Slippery elm)	37		39,270	late spring			dry	none	fall	459
(Continued)	50			spring				stratify 1 yr.	second spring	
	59				90					459
ULMUS GLABRA (Scotch elm)	8		16,409							
ULMUS PARVIFOLIA (Chinese elm)	3		50,000	Sept.			cold, dry		spring	
	77			late summer			dry			1,160
ULMUS PUMILA (Dwarf Asiatic elm)	3	15	55,000	spring			dry, low temperature		first or second spring	
	16		55,240		90	89				
	20				90			stratify	second spring	
	35					25		room temperature tight, 1 yr. OK		
	37		54,898							
	59				80	77				2,207
	74	27	66,006	late spring	87	60	dry	none	spring	2,120
	75	15	72,000	spring	91		dry	none	immediately	5,272
	76	100	25,000	late spring	83	81	dry	dewing	immediately	403
	77		40,000	late spring	84		dry		spring	2,400
ULMUS SEROTINA (Red elm)	1		148,778							

Name	Ref. No.	Lb.Seed 100 lb. Fruit	No.Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb.Seed
ULMUS WALLICHI	54		76,800							
UMBELLULARIA CALIFORNICA (California laurel)	60		300	Oct.-Dec.		41		stratify 90 days		
UROPAPPUS LINEARIFOLIUS	60		216,000	May		71		none		
URTICA GRACILIS	71		4,323,809							
URTICASTRUM DIVARICATUM	71		349,230							

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
VACCARIA VULGARIS	71		51,590							
VACCINIUM (Blueberry)	2			spring and summer				stratify until Jan. then 55-70°F.		
	19	2								
	47						dry	none	winter or spring (under glass)	
	50						clean		soon as ripe	
VACCINIUM CORYMBOSUM (Highbush blueberry)	50						clean		soon as ripe	
	72	2		summer						
VACCINIUM MACROCARPON (Cranberry)	15		469(berries)		90					
	50							stratify	spring	
VACCINIUM OVALIFOLIUM (Big whortleberry)	22		1,606,200							
VACCINIUM OVATUM (Evergreen huckleberry)	22		1,701,100							
	60			Aug.-Sept.		18		stratify 90 days		
	77	2	3,000,000	late summer	49					
VACCINIUM PENNSYLVANICUM (Low sweet blueberry)	19	1	1,941,408	summer	62					
VALLISNERIA AMERICANA (Eel grass)	6			Sept.		87		120 days H_2O at 35-68°F.		
VATERIA INDICA	54		27 (fruit)	May-Aug.		30				24

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
VERBASCUM THAPSUS	71		5,044,444							
VERBENA BRACTEOSA	71		908,000 (nutlets)							
VERBENA HASTATA	71		1,418,750 (nutlets)							
VERBENA STRICTA	71		534,117 (nutlets)							
VERBENA URTICIFOLIA	71		955,789 (nutlets)							
VERBESINA ALTERNIFOLIA	71		126,111							
VERONICA PEREGRINA	71		15,133,333							
VIBURNUM (Viburnum)	2			fall				stratify	fall or spring	
	9							stratify 1 yr.		
	50							stratify 1 yr.	second fall	
VIBURNUM ACERIFOLIUM (Mapleleaf viburnum)	15		4,342(berries)		86					
	19	31	12,680	fall						
	46						clean, dry or in fruit moist peat	stratify 150 days at 32-50°F.		
	57							120-150 days at 70° F., then 90 days at 41°F.		
VIBURNUM AMERICANUM (American cranberrybush)	19	7								
	48			early fall				stratify 60 days at 68°F., then 60 days at 40-50°F.	immediately	

Name	Ref. No.	Lb.Seed 100 lb. Fruit	No.Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb.Seed
VIBURNUM AMERICANUM	58				54					
(American cranberry-bush) (Continued)	72	9	11,000	fall	99		dry	(Germ.2nd yr.)	spring	1,722
VIBURNUM CASSINOIDES	15				58					
(Withe-rod)	72		28,800	fall	99					
VIBURNUM DENTATUM	15		17,904							
(Arrowwood)	19	30								
	46						store in fruit	stratify 120-150 days at 32-50°F.		
	57						moist peat	120 days at 70°F., then 60 days at 41°F.		
	58				92					
	72	25	14,572	Aug.-Oct.	91		sand and peat			1,043
VIBURNUM DILATATUM	46						clean, dry or in fruit	stratify 120 days at 32-50°F.		
(Linden viburnum)	53		32,600	fall	98		dry	(Germination second year)	spring	2,200
	57						moist peat	90 days at 70°F , then 60 days at 41°F.		
VIBURNUM LANTANA	46						clean, dry or in fruit.	stratify 120 days at 32-50°F.		
(Wayfaring tree)	53		13,200	late summer	95					
VIBURNUM LENTAGO	3		2,180	Aug.-Sept.				stratify 1 yr.	second fall	
(Nannyberry)	15	50	4,320		87					
	18		12,450							
	19	9	6,804							
	20		4,914		62			stratify	Apr.	

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
VIBURNUM LENTAGO (Nannyberry) (Continued)	46						clean, dry or in fruit	stratify 90 days at 32-50°F.		
	57						moist peat	90 days at 70°F., then 90-120 days at 41°F.		
	72	23	6,250	fall	92					209
	76		10,000	fall	94		dry	stratify Nov.-June	June	
VIBURNUM NUDUM (Smooth wythe-rod)	57							30 days at 70°F.		
VIBURNUM OPULUS (European cranberrybush)	15	33	16,128							
	46						clean, dry or in fruit	stratify 90 days at 32-50°F.	immediately	
	48			early fall				stratify 60 days at 68°F., then 60 days at 40-50°F.		
	57						moist peat	60 days at 70°F., then 60 days at 41°F.		
	72		12,200	fall or winter	99					
	77	7	12,200	late summer						
VIBURNUM PRUNIFOLIUM (Blackhaw)	12	50	4,200	Oct.		95	clean	stratify	immediately	
	19	23								
	20				60			stratify	Apr. or second fall	
	57						moist peat	120-180 days at 70°F., then 30 days at 41°F.		
	58				97					
	72	20	5,500	fall	94					

Name	Ref. No.	Lb.Seed 100 lb. Fruit	No.Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb.Seed
VIBURNUM RHYTIDOPHYLLUM (Leatherleaf viburnum)	53		15,600							
	72		26,400	late summer	99					
VIBURNUM RUFIDULUM (Southern blackhaw)	57						moist peat	120-150 days at 70°F., then 60 days at 41°F.		
VIBURNUM SARGENTI (Sargent cranberry-bush)	72		8,770	fall	99					
VIBURNUM SCARBRELLUM	57						moist peat	30 days at 70°F.		
VIBURNUM THEIFERUM (Tea viburnum)	46						clean, dry or in fruit	stratify 120 days at 32-50°F.		
VIBURNUM WRIGHTI (Wright viburnum)	46						clean, dry or in fruit	stratify 120 days at 32-50°F.		
VICIA AMERICANA	53		15,600	late sum.	99					
	72		41,314	early summer	90			none	spring	
VICIA ANGUSTIFOLIA	71		24,945							
VICIA ATROPURPUREA (Purple vetch)	62		12,000							
VICIA CALCARATA (Bard vetch)	62		13,000							
VICIA DASYCARPA (Woollypod vetch)	62		10,500							
VICIA FULGENS	72		9,534		92			none	spring	
VICIA MONANTHA (Monantha vetch)	62		9,300							

Name	Ref. No	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
VICIA NARBONENSIS	72		4,086			88		none	spring	
VICIA PANNONICA (Hungarian vetch)	62		10,300							
VICIA SATIVA (Common vetch)	62		6,850							
	63		8,608							
	72		8,600			95		none	spring	
VICIA VILLOSA (Hairy vetch)	62		20,800							
	63		16,000							
	64					88				
	72		16,300	summer		92		none	spring	
VICIA VILLOSA (Smooth) (Smooth vetch)	62		20,800							
VIGNA SINENSIS (Cowpea)	62		2,900							
	64					70				
VITEX (Chaste-tree)	26			fall			dry	none	spring	
	47							stratify	spring	
VITEX ALTISSIMA	54		6,080	July-Aug.						11
VITEX GLABRATA	54		2,080	June-Aug.		40				580
VITEX NEGUNDO (Negundo chaste-tree)	3	75	59,200	July-Oct.				stratify few weeks	spring	
	14					38	dry	none	spring	
VITEX PEDUNCULARIS	54		5,520	July-Aug.		15				
VITIS (Grape)	12	20	12,800	Oct.	85		clean	stratify		
	15		14,233							
	16		48,127		37					
	19	8								

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test. %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
VITIS (Grape) (Continued)	20				81				Nov.	
	37	6	19,897							
	47							stratify	spring	
	50							stratify	fall or stratify	
	58	13								
	59				85	84				
VITIS ARIZONICA (Canyon grape)	75		11,000	late summer	90		dry	none	spring	
VITIS CALIFORNICA (California grape)	60		11,000 (3,500 dry fruits)	Sept.-Oct.		74		none		
VITIS CORDIFOLIA (Frost grape)	72	14	17,000	fall	90					
VITIS ROTUNDIFOLIA	58				84					
VITIS VULPINA (Riverbank grape)	2			Sept.			dry and clean			
	18		17,210		90					
	72		7,400	fall	99					
	76	10	14,500	Sept.	98	96	dry	stratify Nov.-Mar.	spring	

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
WASHINGTONIA LONGISTYLIS	71		37,833 (mericarps)							
WEIGELA (See Diervilla)										
WENDLANDIA EXSERTA	54		382,400	June						
WISTERIA (Wisteria)	26 47			summer			dry dry	soak none	spring spring	
WISTERIA SINENSIS (Chinese wisteria)	8 26		1,227	summer			dry	soak	spring	
WOODFORDIA FLORIBUNDA	54					280 (per dram)				
WRIGHTIA TOMENTOSA	54		26,400	Dec.-Feb.						
WYETHIA HELENIOIDES	60		10,000	Aug.-Sept.		36		none		
WYETHIA MOLLIS (Woolly mule-ears)	60		25,000	Sept.-Oct.		16		none		

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
XANTHIUM ITALICUM	71		7,108							
XANTHOCERAS SORBIFOLIA	47							stratify	spring	
	50							stratify	spring	
XANTHORHIZA SIMPLICISSIMA (See Zanthorhiza apiifolia)										
XYLIA DOLABRIFORMIS	54		1,840	Dec.-July		84				1,070
XYLIA XYLOCARPA (See X. dolabriformis)										

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
YUCCA ANGUSTISSIMA	17					78				
YUCCA BACCATA (Banana yucca)	17					78				
YUCCA ELATA (Soapweed)	17 72		 15,000			78 90				
YUCCA GLAUCA (Soapweed yucca)	13					32				
YUCCA HARRIMANIAE	17					58				
YUCCA SCHOTTI	17					28				
YUCCA WHIPPLEI (Chaparral yucca)	60		27,000	throughout summer		85		none		
ZANTHORHIZA APIIFOLIA (Yellowroot)	47						dry	none	spring	
ZANTHOXYLUM AMERICANUM (Prickly ash)	47						dry	none	spring	
ZAUSCHNERIA CALIFORNICA (Mexican balsamea)	60		1,000,000	fall		68		none		
ZEA MAYS (Corn)	62		1,200							
ZEA MAYS (Popcorn)	62		3,000							
ZELKOVA KEAKI (See Z. serrata)										
ZELKOVA SERRATA (Sawleaf zelkova)	8 46		26,727				clean, dry	stratify 90 days at 32-50°F.		
	54		20,800			1				

Name	Ref. No.	Lb.Seed 100 lb. Fruit	No.Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb.Seed
ZIZIA CORDATA	71		263,188							
ZIZYPHUS JUJUBA (Jujube)	17			late fall		70		remove from shell	spring	
	26			early fall				stratify		
	54		704	Jan.-Nov.		31				220
	75			Oct.			dry	crack hull	spring	
ZIZYPHUS LYDIOIDES (Lete bush)	17					8				
ZIZYPHYS XYLOPYRA	54		96	Feb.-Mar						10
ZYGADENUS CHLORANTHUS	71		585,806							